FINAL REGISTRATION REPORT

Part B

Section 3

Efficacy Data and Information

Concise summary

Product code: A-200SL-OR3-C

Product name: LEPTOSAR 200 SL

Chemical active substance:

ACETAMIPRID, 200 g/L

Central Zone

Zonal Rapporteur Member State: POLAND

CORE ASSESSMENT

Applicant: CIECH Sarzyna S.A.

Submission date: 23/02/2021

MS Finalisation date: 01/07/2022

Version history

When	What
February 2021	First submission for product authorization to zonal RMS
May 2021	Dossier sent for evaluation
December 2021	zRMS finalised evaluation
July 2022	Final version prepared by zRMS after Commenting period

Table of Contents

3 Efficacy Data and Information (including Value Data) on the Plant Protection Product (KCP 6)

Transformation of the dRR (applicant version) into the RR (zRMS version)

Comments of zRMS:	Conclusions from the assessment were prepared using grey commenting boxes placed at the end of each chapter. The parts of the text amended or added by the zRMS evaluator are highlighted in grey and the parts struck off are ~~visibly marked with the grey font~~.

3.1 Summary and conclusions of zRMS on Section 3: Efficacy (KCP 6)

Abstract

zRMS

The submitted efficacy data (reports from field trials) fulfil requirements and conditions determined in the EPPO guidelines, the Commission Regulation (EU) No 545/2011 of 10 June 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the data requirements for plant protection products. The reports and data were submitted to support the evaluation for the authorization of LEPTOSAR 200 SL in the NE EPPO climatic zone, the SE EPPO climatic zone and the Maritime EPPO climatic zone.

LEPTOSAR 200 SL contains 200 g/L of an active substance acetamiprid, and is formulated as a soluble concentrate (SL). The plant protection product is used in oil seed rape, maize and cereals as insecticide for the control of against insect pests at a dose rate max 0,3 L/ha with 1 application in season.

The applicant submitted 85 reports showing the results in research into product efficacy carried out in 2017, 2018, and 2019 in the NE, SE and Maritime EPPO climatic zones, on cultivars of:
- winter oil seed rape (63 trials)
- maize (16 trials)
- winter wheat (6 trials)

to supports the registration of LEPTOSAR 200 SL in countries within the Central registration zone: PL, CZ, DE, HU, RO, SK.

NE EPPO climatic zone (Poland)

It might be concluded that the post-emergence application of LEPTOSAR 200 SL provides benefit against:

1. CEUTNA at 0,2 – 0,3 l/ha dose rates
2. CEUTAS at 0,15 – 0,3 l/ha dose rates
3. CEUTQU at 0,2 – 0,3 l/ha dose rates
4. DASYBR at 0,15 – 0,3 l/ha dose rates
5. MELIAE at 0,15 – 0,3 l/ha dose rates
   on winter oil seed rape comparable or better with standard products: Apis 200 SE and Mospilan
6. PYRUNU at 0,3 l/ha dose rate comparable or better with standard products Karate Zeon 50 CS.

Results from efficacy trials demonstrate that LEPTOSAR 200 SL is a good alternative to standard insecticide for the control of insect pests in winter oil seed rape and maize with one post emergence application in season, between growth stages 30-71 for winter oil seed rape, and between growth stages 53-59 for maize.

Maritime EPPO climatic zone (Czech Republic, Germany)

The Applicant presented less than minimal number of 6 of trials for CEUTNA, CEUTAS, CEUTQU, DASYBR, PYRUNU. The data might not be sufficient to prove the effectiveness of the product. It is for decision of cMS whether above mentioned trials and results should be taken under consideration to prove efficacy of LEPTOSAR 200SL. What is more, the number of trials for MELIAE is 7, but not in all trials

took into account evaluation in later periods. It is also for decision of cMS whether above mentioned trials and results should be taken under consideration to prove efficacy of LEPTOSAR 200SL.

SE EPPO climatic zone (Hungary, Slovakia, Romania)

It might be concluded that the post-emergence application of LEPTOSAR 200 SL provides benefit against:

1. CEUTNA at 0,2 – 0,3 l/ha dose rates
2. CEUTAS at 0,2 – 0,3 l/ha dose rates
3. CEUTQU at 0,2 – 0,3 l/ha dose rates
4. MELIAE at 0,2 – 0,3 l/ha dose rates

on winter oil seed rape comparable or better with standard products: Apis 200 SE and Mospilan.

Results from efficacy trials demonstrate that LEPTOSAR 200 SL is a good alternative to standard insecticide for the control of CEUTNA, CEUTAS, CEUTQU, MELIAE in winter oil seed rape with one post emergence application in season, between growth stages 30-71 for winter oil seed rape.

The Applicant presented less than minimal number 6 trials for the following combination major crop/pest: DASYBR (5 trials) and DIABVI (5 trials), PYRUNU (4 trials). What is more for PYRUNU data trials were carried out in only one season. A similar situation is for LEMAME, for which the Applicant presented trials conducted in one season (2019, RO), but presented appropriate number 6 of trials. It is for decision of cMS whether above mentioned trials and results are sufficient to prove efficacy of LEPTOSAR 200SL.
What is more, the Applicant declared in the GAP table the use of the product against LEMAME for spring and winter wheat (TRZAX), hard wheat (TRZDU), spelt wheat (TRZSP), rye (SECCE) in RO. In Evaluator opinion the data for LEMAME might be extrapolated from winter wheat on other cereals, but at least 1 – 2 trials should be presented for every extrapolated crop. It is for decision of cMS RO whether data presented for winter wheat against LEMAME will be sufficient also for other cereals.

The applicant provided full information on resistance active substance. The presented strategy complies with the resistance management strategy recommended by IRAC.

LEPTOSAR 200 SL was safe to the crops on which it was applied as no phytotoxicity symptoms were observed in the efficacy tests. The product did not cause a negative impact on the yield of winter oil seed rape, maize, winter wheat.
The product LEPTOSAR 200 SL is expected to have no negative effect on transformation processes.
No problems is going to be linked to LEPTOSAR 200 SL use in succeeding and adjusted crops, if product uses in accordance with the recommendations.
According to the above, the plant protection product LEPTOSAR 200 SL is recommended to be approved to use according to the table of intended uses for LEPTOSAR 200 SL. The evaluation was carried out in accordance with the Uniform Principles.

Table 3.1-1: Acceptability of intended uses (and respective fall-back GAPs, if applicable)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
Zonal uses (field or outdoor uses, certain types of protected crops)														
1.	PL	Winter oilseed rape (BRSNW)	F	Pollen Beetles (Meligethes aeneus) – MELIAE	Foliar spray	After reaching thresholds or after warning service appeal BBCH 30-69	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	A
2.	PL	Winter oilseed rape (BRSNW)	F	Rape stem weevil (*Ceutorhynchus napi*) - CEUTNA	Foliar spray	After reaching thresholds or after warning service appeal BBCH ~~17~~ 30-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	A
3.	PL	Winter oilseed rape (BRSNW)	F	Cabbage stem weevils (*Ceutorhynchus pallidactylus*) – CEUTQU	Foliar spray	After reaching thresholds or after warning service appeal BBCH ~~17~~ 30-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	A
4.	PL	Winter oilseed rape (BRSNW)	F	Cabbage seed weevil (*Ceutorhynchus obstrictus*) – CEUTAS	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	A
5.	PL	Winter oilseed rape (BRSNW)	F	Brassica pod midge (*Dasineura brassicae*,) - DASYBR	Foliar spray	After reaching thresholds or after warning	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	A

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
						service appeal BBCH 59-71								
6.	PL	Maize (ZEMAX)	F	European corn borer (*Ostrinia nubilalis*) - PYRUNU	Foliar spray	After reaching thresholds or after warning service appeal BBCH ~~51-75~~ 51-61	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	300-500	n.a.	-	A
7.	DE	Winter oilseed rape (BRSNW)	F	Pollen Beetles (Meli-gethes aeneus) – ME-LIAE	Foliar spray	After reaching thresholds or after warning service appeal BBCH 30-69	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
8.	DE	Winter oilseed rape (BRSNW)	F	Rape stem weevil (*Ceutorhynchus napi*) - CEUTNA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 17-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
9.	DE	Winter oilseed rape (BRSNW)	F	Cabbage stem weevils (*Ceutorhynchus palli-dactylus*) – CEUTQU	Foliar spray	After reaching thresholds or after warning service appeal BBCH 17-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
10.	DE	Winter oilseed rape (BRSNW)	F	Cabbage seed weevil (*Ceutorhynchus ob-strictus*) – CEUTAS	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
C	DE	Winter oilseed	F	Brassica pod midge	Foliar spray	After reaching	a) 1	n.a.	a) 0,3 l/ha	a) 60 g/ha	200-400	n.a.	To be submitted	C

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		rape (BRSNW)		(*Dasineura brassicae*,) - DASYBR		thresholds or after warning service appeal BBCH 59-71	b) 1		b) 0,3 l/ha	b) 60 g/ha			further via mutual recognition procedure	
C	DE	Maize (ZEMAX)	F	European corn borer (*Ostrinia nubilalis*) - PYRUNU	Foliar spray	After reaching thresholds or after warning service appeal BBCH 51-75	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	300-500	n.a.	To be submitted further via mutual recognition procedure	C
C	CZ	Winter oilseed rape (BRSNW)	F	Pollen Beetles (Meli-gethes aeneus) – ME-LIAE	Foliar spray	After reaching thresholds or after warning service appeal BBCH 30-69	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
14.	CZ	Winter oilseed rape (BRSNW)	F	Rape stem weevil (*Ceutorhynchus napi*) - CEUTNA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 17-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
15.	CZ	Winter oilseed rape (BRSNW)	F	Cabbage stem weevils (*Ceutorhynchus palli-dactylus*) – CEUTQU	Foliar spray	After reaching thresholds or after warning service appeal BBCH 17-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
16.	CZ	Winter oilseed rape (BRSNW)	F	Cabbage seed weevil (*Ceutorhynchus ob-strictus*) – CEUTAS	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
17.	CZ	Winter oilseed rape (BRSNW)	F	Brassica pod midge (*Dasineura brassicae*,) - DASYBR	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
18.	CZ	Maize (ZEMAX)	F	European corn borer (*Ostrinia nubilalis*) - PYRUNU	Foliar spray	After reaching thresholds or after warning service appeal BBCH 51-75	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	300-500	n.a.	To be submitted further via mutual recognition procedure	C
19.	RO	Winter oilseed rape (BRSNW)	F	Pollen Beetles (Meli-gethes aeneus) – ME-LIAE	Foliar spray	After reaching thresholds or after warning service appeal BBCH 30-69	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
20.	RO	Winter oilseed rape (BRSNW)	F	Rape stem weevil (*Ceutorhynchus napi*) - CEUTNA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 17-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
21.	RO	Winter oilseed rape (BRSNW)	F	Cabbage stem weevils (*Ceutorhynchus palli-dactylus*) – CEUTQU	Foliar spray	After reaching thresholds or after warning service appeal BBCH 17-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
22.	RO	Winter oilseed rape (BRSNW)	F	Cabbage seed weevil (*Ceutorhynchus ob-strictus*) – CEUTAS	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
23	RO	Winter oilseed rape (BRSNW)	F	Brassica pod midge (*Dasineura brassicae*,) - DASYBR	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
24.	RO	Soft wheat (TRZAX), Hard wheat (TRZDU), Spelt wheat (TRZSP), Rye (SECCE)	F	Cereal leaf beetle (*Oulema melanopus*) - LEMAME	Foliar spray	After reaching thresholds or after warning service appeal BBCH 37-65	a) 1 b) 1	n.a.	a) 0,2 l/ha b) 0,2 l/ha	a) 40 g/ha b) 40 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
25.	RO	Maize (ZEMAX)	F	Western corn rootworm (*Diabrotica virgifera*) - DIABVI	Foliar spray	After reaching thresholds or after warning service appeal BBCH 51-75	a) 1 b) 1	n.a.	a) 0,2 l/ha b) 0,2 l/ha	a) 40 g/ha b) 40 g/ha	300-500	n.a.	To be submitted further via mutual recognition procedure	C
26.	RO	Maize (ZEMAX)	F	European corn borer (*Ostrinia nubilalis*) - PYRUNU	Foliar spray	After reaching thresholds or after warning service appeal BBCH 51-75	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	300-500	n.a.	To be submitted further via mutual recognition procedure	C
27.	HU	Winter oilseed rape (BRSNW)	F	Pollen Beetles (Meli-gethes aeneus) – ME-LIAE	Foliar spray	After reaching thresholds or after warning service appeal BBCH 30-69	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
28.	HU	Winter oilseed rape (BRSNW)	F	Rape stem weevil (*Ceutorhynchus napi*) - CEUTNA	Foliar spray	After reaching thresholds or after warning	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
						service appeal BBCH 17-59								
29.	HU	Winter oilseed rape (BRSNW)	F	Cabbage stem weevils (*Ceutorhynchus pallidactylus*) – CEUTQU	Foliar spray	After reaching thresholds or after warning service appeal BBCH 17-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
30.	HU	Winter oilseed rape (BRSNW)	F	Cabbage seed weevil (*Ceutorhynchus obstrictus*) – CEUTAS	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
31.	HU	Winter oilseed rape (BRSNW)	F	Brassica pod midge (*Dasineura brassicae*,) - DASYBR	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
32.	HU	Maize (ZEMAX)	F	Western corn rootworm (*Diabrotica virgifera*) - DIABVI	Foliar spray	After reaching thresholds or after warning service appeal BBCH 51-75	a) 1 b) 1	n.a.	a) 0,2 l/ha b) 0,2 l/ha	a) 40 g/ha b) 40 g/ha	300-500	n.a.	To be submitted further via mutual recognition procedure	C
33.	HU	Maize (ZEMAX)	F	European corn borer (*Ostrinia nubilalis*) - PYRUNU	Foliar spray	After reaching thresholds or after warning service appeal BBCH 51-75	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	300-500	n.a.	To be submitted further via mutual recognition procedure	C
34.	SK	Winter oilseed rape	F	Pollen Beetles (Meligethes aeneus) – ME-	Foliar spray	After reaching thresholds or	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual	C

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		(BRSNW)		LIAE		after warning service appeal BBCH 30-69							recognition procedure	
35.	SK	Winter oilseed rape (BRSNW)	F	Rape stem weevil (*Ceutorhynchus napi*) - CEUTNA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 17-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
36.	SK	Winter oilseed rape (BRSNW)	F	Cabbage stem weevils (*Ceutorhynchus palli-dactylus*) – CEUTQU	Foliar spray	After reaching thresholds or after warning service appeal BBCH 17-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
37.	SK	Winter oilseed rape (BRSNW)	F	Cabbage seed weevil (*Ceutorhynchus ob-strictus*) – CEUTAS	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
38.	SK	Winter oilseed rape (BRSNW)	F	Brassica pod midge (*Dasineura brassicae*,) - DASYBR	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	To be submitted further via mutual recognition procedure	C
39.	SK	Maize (ZEMAX)	F	Western corn rootworm (*Diabrotica virgifera*) - DIABVI	Foliar spray	After reaching thresholds or after warning service appeal BBCH 51-75	a) 1 b) 1	n.a.	a) 0,2 l/ha b) 0,2 l/ha	a) 40 g/ha b) 40 g/ha	300-500	n.a.	To be submitted further via mutual recognition procedure	C
40.	SK	Maize (ZEMAX)	F	European corn borer	Foliar spray	After reaching	a) 1	n.a.	a) 0,3 l/ha	a) 60 g/ha	300-500	n.a.	To be submitted	C

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
				(*Ostrinia nubilalis*) - PYRUNU		thresholds or after warning service appeal BBCH 51-75	b) 1		b) 0,3 l/ha	b) 60 g/ha			further via mutual recognition procedure	
Minor uses according to Article 51														
41.	PL	Spring oilseed rape (BRSNS) white mustard (SINAL); black mustard (BRSNI), Chinese mustard (BRSJU) turnip rape (BRSRO)	F	Pollen beetles (*Meligethes aeneus*) – MELIAE	Foliar spray	After reaching thresholds or after warning service appeal BBCH 30-69	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	
42.	PL	Spring oilseed rape (BRSNS) white mustard (SINAL); black mustard (BRSNI), Chinese mustard (BRSJU) turnip rape (BRSRO)	F	Rape stem weevil (*Ceutorhynchus napi*) - CEUTNA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 20-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	
43.	PL	Spring oilseed rape (BRSNS) white mustard (SINAL); black mustard (BRSNI), Chinese mustard (BRSJU)	F	Cabbage stem weevils (*Ceutorhynchus pallidactylus*) – CEUTQU	Foliar spray	After reaching thresholds or after warning service appeal BBCH 20-59	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		turnip rape (BRSRO)												
44.	PL	Spring oilseed rape (BRSNS) white mustard (SINAL); black mustard (BRSNI), Chinese mustard (BRSJU) turnip rape (BRSRO)	F	Cabbage seed weevil (*Ceutorhynchus ob-strictus*) – CEUTAS	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	
45.	PL	Spring oilseed rape (BRSNS); white mustard (SINAL); black mustard (BRSNI), Chinese mustard (BRSJU); turnip rape (BRSRO)	F	Brassica pod midge (*Dasineura brassicae*,) - DASYBR	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-71	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	
46.	PL	Flax (LIUUT) - seeds and fiber production	F	Large flax flea beetle (*Aphthona euphorbiae*) - APHTEU; Small flax flea beetle (*Longitarsus parvulus*) - LONIPA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 10-14	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	
47.	PL	Flax (LIUUT) - seeds and fiber production	F	Cabbage thrips (*Thrips angusticeps*) - THRIAN; Flax thrips (*Thrips lini)* - THRILI	Foliar spray	After reaching thresholds or after warning service appeal	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
						BBCH 30-61								
48.	PL	Common hemp (CNISA**)** - seeds and fiber produc-tion	F	Hemp flea beetle (*Psyl-liodes attenuata*) - PSYIAT	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-14	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	
49.	PL	Common hemp (CNISA**)** - seeds and fiber produc-tion	F	European maize borer (*Ostrinia nubilalis*) - PYRUNU	Foliar spray	After reaching thresholds or after warning service appeal (June)	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	
50.	PL	Common hemp (CNISA**)** - seeds and fiber produc-tion	F	Aphids (*Aphididae*) – APXXSP; Thrips (*Thysanoptera*) - 1THYSO	Foliar spray	After reaching thresholds or after warning service appeal (BBCH 39-59)	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-400	n.a.	-	
51.	PL	Soybean (GLXMA) – seeds production	F	Sitona (*Sitona sp.*) - SITNSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-19	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-500	n.a.	-	
52.	PL	Soybean (GLXMA) – seeds production	F	Bishop bug (*Lygus rugulipennis*) – LYGURU; Aphids (*Aphididae*) – APXXSP	Foliar spray	After reaching thresholds or after warning	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-500	n.a.	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
						service appeal BBCH 61-65								
53.	PL	Opium poppy (PAPSO) – seeds production	F	Capsule midge (*Dasi-neura papaveris*) - DASYPA; Capsule weevils (*Neo-glocianus maculaalba*) - CEUTMA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 10-39	a) 1 b) 1	n.a.	a) 0,15 l/ha b) 0,15 l/ha	a) 30 g/ha b) 30 g/ha	200-400	n.a.	-	
54.	PL	Sunflower (HELAN) – seeds production	F	Aphids (*Aphididae*) – APXXSP; Lygus bug (*Lygus sp.*) - LYGUSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 10-65	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	300-500	n.a.	-	
55.	PL	Pumpkin (CUUPE) – seeds production	F	Lygus bug (*Lygus sp.*) - LYGUSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 21-69	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	200-500	n.a.	-	
56.	PL	sugar maize Zea mays L. convar. saccharata Koern. (ZEAMS); Popcorn (ZEAME); sorghum (SORVU), proso true millet (PANMI)	F	European corn borer *(Ostrinia nubilalis)* - PYRUNU; Aphids (*Aphididae*) – APXXSP;	Foliar spray	After reaching thresholds or after warning service appeal BBCH 51-75	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	300-500	n.a.	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
57.	PL	Spring rye (SECCS), ~~Spring triticale (TTLWS),~~ Durum wheat (TRZDU), Spelt wheat (TRZSP), einkorn wheat (TRZMO) emmer wheat (TRZDI)	F	Cereal leaf beetle (*Oulema melanopus*) – LEMAME	Foliar spray	After reaching thresholds or after warning service appeal BBCH 37-65	a) 1 b) 1	n.a.	a) 0,2 l/ha b) 0,2 l/ha	a) 40 g/ha b) 40 g/ha	200-400	n.a.	-	
58.	PL	Spring rye (SECCS), Spring triticale (TTLWS), Durum wheat (TRZDU), Spelt wheat (TRZSP), einkorn wheat (TRZMO) emmer wheat (TRZDI)	F	Cereal bug (*Eurygaster maura*)- EURYMA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 30-59	a) 1 b) 1	n.a.	a) 0,2 l/ha b) 0,2 l/ha	a) 40 g/ha b) 40 g/ha	200-400	n.a.	-	
59.	PL	Spring wheat (TRZAS)	F	Cereal bug (*Eurygaster maura*)- EURYMA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 30-59	a) 1 b) 1	n.a.	a) 0,2 l/ha b) 0,2 l/ha	a) 40 g/ha b) 40 g/ha	200-400	n.a.	-	
60.	PL	Winter wheat (TRZAW)	F	Cereal bug (*Eurygaster maura*)- EURYMA	Foliar spray	After reaching thresholds or after warning	a) 1 b) 1	n.a.	a) 0,2 l/ha b) 0,2 l/ha	a) 40 g/ha b) 40 g/ha	200-400	n.a.	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
						service appeal BBCH 30-59								
61.	PL	Spring triticale (TTLWS), Winter triticale (TTLWI), Winter rye (SECCW)	F	Cereal bug (*Eurygaster maura*)- EURYMA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 30-59	a) 1 b) 1	n.a.	a) 0,2 l/ha b) 0,2 l/ha	a) 40 g/ha b) 40 g/ha	200-400	n.a.	-	
62.	PL	tomato (LYPES), aubergine (SOLME), Paprika (CPSAN)	G	Glasshouse white-fly(*Trialeurodes va-porariorum*) – TRIAVACommon cotton thrips (*Thrips tabaci*) – THRITB; Western grass thrips (*Frankliniella occiden-talis*) - FRANOC; Leaf miner (*Phytomyza sp.)* - PHYYSP; Aphids (*Aphididae*) – APXXSP; , Lygus bug(*Lygus sp.)* - LYGUSP; Flea beetle (*Psylliodes*) - 1PSYIG	Foliar spray	After reaching thresholds or after warning service appeal BBCH 20 – 89	a) 1 b) 1	n.a.	a) 0,3 l/ha b) 0,3 l/ha	a) 60 g/ha b) 60 g/ha	300-750	3	-	
63.	PL	Wild apple (MABSY)	F	Aphids (*Aphididae*) – APXXSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
64.	PL	Wild apple (MABSY)	F	Codling moth (*Cydia pomonella*) - CARPPO	Foliar spray	After reaching thresholds or after warning service appeal BBCH 69-74	a) 2 b) 2	7-14	a) 0,125 L/ha b) 0,25L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
65.	PL	Wild apple (MABSY)	F	Pear leaf blister moth (*Leucoptera scitella*) - LEUCSC	Foliar spray	After reaching thresholds or after warning service appeal BBCH 57-69	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
66.	PL	Wild apple (MABSY)	F	Apple fruit sawfly (*Hoplocampa testudi-nea*) - HOPLTE	Foliar spray	After reaching thresholds or after warning service appeal BBCH 65-69	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
67.	PL	Wild apple (MABSY)	F	Apple leaf midge (*Dasineura mali*) - DASYMA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-73	a) 2 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25g/ha b) 50 g/ha	200-750	14	-	
68.	PL	Wild apple (MABSY)	F	Bracken clock (*Phyl-lopertha horticola*) - PHPHHO	Foliar spray	After reaching thresholds or after warning service appeal BBCH 59-73	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
69.	PL	Pear (PYUCO), Chinese pear (PYUPY)	F	Aphids (Aphididae) – APXXSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
70.	PL	Pear (PYUCO), Chinese pear (PYUPY)	F	Codling moth (*Cydia pomonella*) - CARPPO	Foliar spray	After reaching thresholds or after warning service appeal BBCH-71-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
71.	PL	Pear (PYUCO), Chinese pear (PYUPY)	F	Cherry slug saw-fly(*Caliroa limacina*) - ERICLI	Foliar spray	After reaching thresholds or after warning service appeal BBCH 71-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
72.	PL	Pear (PYUCO), Chinese pear (PYUPY)	F	Apple bud wee-vil(*Anthonomus piri*) - ANTHPY	Foliar spray	After reaching thresholds or after warning service appeal BBCH 51-59	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
73.	PL	Pear (PYUCO), Chinese pear (PYUPY)	F	Pear leaf midge (*Dasi-neura pyri*) - DASYPY	Foliar spray	After reaching thresholds or after warning service appeal BBCH 71-79	a) 2 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
74.	PL	Pear (PYUCO), Chinese pear (PYUPY)	F	Pear psylla (*Cacopsylla pyri*) - PSYLPI; Pear sucker (*Cacopsylla pyrisuga*) - PSYLPY; , Pear psyllid (*Cacopsyl-la pyricola*) - PSYLPC	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-71	a) 2 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
75.	PL	Quince (CYDOB), medlar (MSPGE)	F	Aphids (*Aphididae*) – APXXSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
76.	PL	Quince (CYDOB), medlar (MSPGE)	F	Codling moth (*Cydia pomonella*) - CARPPO	Foliar spray	After reaching thresholds or after warning service appeal BBCH 71-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
77.	PL	Sour cherry (PRNCE), sweet cherry (PRNAV),	F	Cherry fruit fly (*Rhago-letis cerasi*) - RHAGCE	Foliar spray	After reaching thresholds or after warning service appeal BBCH 76-81	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
78.	PL	Sour cherry (PRNCE), sweet cherry (PRNAV),	F	Aphids (*Aphididae*) – APXXSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	250-750	14	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
79.	PL	Sour cherry (PRNCE), sweet cherry (PRNAV),	F	Cherry slug sawfly (*Caliroa limacina*) - ERICLI	Foliar spray	After reaching thresholds or after warning service appeal BBCH 71-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
80.	PL	Sour cherry (PRNCE), sweet cherry (PRNAV),	F	Cherry fruit moth (*Argyresthia ephippiel-la*) - ARGYEP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 51-59	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
81.	PL	Sour cherry (PRNCE), sweet cherry (PRNAV),	F	Cherry-stone weevil (*Anthonomus rectiros-tris*) - ANTHRE	Foliar spray	After reaching thresholds or after warning service appeal BBCH 57-69	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
82.	PL	Sour cherry (PRNCE), sweet cherry (PRNAV),	F	Apple brown tortrix (*Pandemis heparana*) - PANDHE; Reticulated tortrix (*Adoxophyes orana*) - CAPURE; European leaf roller (*Archips rosana*) - CACORO; Whelk (*Tortricidae*) - 1TORTF; and other leaf caterpillars	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-87	a) 2 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25g/ha b) 50 g/ha	200-750	14	-	
83.	PL	Peach (PRNPS), Nectarine (PRNPN),apricot	F	Apple brown tortrix (Pandemis heparana) - PANDHE; Reticulated	Foliar spray	After reaching thresholds or after warning	a) 2 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a)25 g/ha b) 50 g/ha	200-750	14	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		(PRNAR)		tortrix (Adoxophyes orana) - CAPURE; European leaf roller (Archips rosana) - CACORO; Whelk (Tortricidae) - 1TORTF; and other leaf caterpillars		service appeal BBCH 11-87								
84.	PL	Peach (PRNPS), Nectarine (PRNPN),apricot (PRNAR)	F	Aphids (*Aphididae*) – APXXSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
85.	PL	Plum (PRNDO)	F	Aphids (*Aphididae*) – APXXSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
86.	PL	Plum (PRNDO)	F	Plum fruit sawfly (*Hoplocampa minuta*) - HOPLMI; Plum sawfly (*Hoplocampa flava*) - HOPLFL;	Foliar spray	After reaching thresholds or after warning service appeal BBCH 69-87	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
87.	PL	Plum (PRNDO)	F	Plum fruit moth (*Laspeyresia funebrana*) - LASPFU	Foliar spray	After reaching thresholds or after warning service appeal	a) 2 b) 2	14-21	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
						BBCH 71-81								
88.	PL	Plum (PRNDO)	F	European brown scale (*Parthenolecanium corni*) - LECACO	Foliar spray	After reaching thresholds or after warning service appeal BBCH 54-59	a) 1 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25g/ha b) 50 g/ha	200-750	14	-	
89.	PL	Plum (PRNDO)	F	Apple brown tortrix (*Pandemis heparana*) - PANDHE; Reticulated tortrix (*Adoxophyes orana*) - CAPURE; European leaf roller (*Archips rosana*) - CACORO; Whelk (*Tortricidae*) - 1TORTF; and other leaf caterpillars	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-87	a) 2 b) 2	7-10	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
90.	PL	Hazelnut (CYLAV)	F	Aphids (Aphididae) – APXXSP; , Hazelnut weevil (*Curculio nu-cum*) - CURCNU; *(Oberea linearis)* - OBERLI; European brown scale (*Par-thenolecanium corni*) - LECACO; , Reticulated tortrix (*Adoxophyes orana*) - CAPURE; European leaf roller (*Archips rosana*) - CACORO; other totrix and other leaf caterpil-lars	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11 – 65	a) 2 b) 2	7-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
91.	PL	walnut (IUGRE)	F	Aphids (Aphididae) – APXXSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 50 – 65	a) 2 b) 2	10-14	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	14	-	
92.	PL	Tobacco (NIOTA)	F	Common cotton thrips (*Thrips tabaci*) - THRITB; Aphids (Aphididae) – APXXSP	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11 – 85	a) 2 b) 2	7-10	a) 0,125 L/ha b) 0,25 L/ha	a) 25g/ha b) 50 g/ha	200-750	na	-	
93.	PL	Common osier (SAXVI) Purple willow (SAXPU)	F	Aphids (Aphididae) – APXXSP, Balsam poplar leaf beetle (*Chrysomela populi*) - CHRSPO; (Chrysomela saliceti)- CHRSSA, Blue willow beetle (*Phratora vulgatissima*) - PHRRVU; Brassy willow leaf beetle (*Phratora vitellinae*) - PHRRVI; Cream-bordered green pea moth (*Earias clorana*) - EARICH; , Gall midge (*Dasineura mar-ginemtorquens*) - RHABMA	Foliar spray	After reaching thresholds or after warning service appeal BBCH 11-69	a) 2 b) 2	10	a) 0,125 L/ha b) 0,25 L/ha	a) 25 g/ha b) 50 g/ha	200-750	na	-	
94.	PL	Forest and orna-	F	Aphids (*Aphididae*) –	Foliar spray	After reaching	a) 1	n.a.	a) 0,25 L/ha	a) 50 g/ha	200-400	na	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		mental nurseries plants, restockings, afforestations and forest trees' seed plantations; Christmas trees grown on planta-tions		APXXSP, Springtails (*Collembola*) - 1COLLO; Larch case-bearer (*Coleophora laricella*) - COLELA		thresholds or after warning service appeal BBCH 11-69	b) 1		b) 0,25 L/ha	b) 50 g/ha				

* Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1.

** F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application

Column 15: zRMS conclusion.

A	Acceptable
R	Acceptable with further restriction
C	To be confirmed by cMS
N	Not acceptable / evaluation not possible
n.r.	Not relevant for section 3

3.2 Efficacy data (KCP 6)

Introduction

This submission summarises the available field data for LEPTOSAR 200 SL (product code A-200SL-OR3-C), an insecticide product for use in cereals, corn and oilseed rape. It is intended to register LEPTOSAR 200 SL in Poland (zRMS) and in other countries belonging to Central zone (Germany, Czech Republic, United Kingdom, Hungary and Romania) submitted further via mutual recognition procedure. Moreover, in Poland, it is intended to register several minor uses according to Article 51. All field data from the Maritime, North-eastern and South-Eastern climatic zones, as defined in EPPO Guideline PP1/241, are included.

Description of active substances

The active substance in the proposed product LEPTOSAR 200 SL is acetamiprid.

Acetamiprid is a selective, neonicotinoid insecticide, with translaminar and systemic properties, and contact and stomach action. It is antagonistic to the nicotinic acetylcholine receptor, affecting the synapses in the insect central nervous system.

Mode of action

Table 3.2- 1: Details of the active substance

Active substance	Acetamiprid
g/L	200 g/L
Chemical group:	Neonicotinoid
Mode of action:	nACHhR agonism (nicotinic acetylcholine receptor)
Biological action:	post-emergence insecticide

Description of the plant protection product
LEPTOSAR 200 SL is a soluble liquid (SL) containing 200g/L acetamiprid.

Table 3.2-1: Simplified table of currently registered uses and requested uses for the product code.

Uses		Member State	Requested rate(s), L/ha	Comments
Crop(s)	Target(s)			
BRSNW	CEUTNA, CEUTQU	CZ	0.25-0.3	To be submitted further via mutual recognition procedure
		DE	0.3	To be submitted further via mutual recognition procedure
		PL	**0.2-0.3**	-
		RO, HU	0.2-0.3	To be submitted further via mutual recognition procedure
	CEUTAS, DASYBR, MELIAE	CZ	0.2-0.3	To be submitted further via mutual recognition procedure
		DE	0.3	To be submitted further via mutual recognition procedure
		PL	**0.15-0.3**	-
		RO, HU	0.2-0.3	To be submitted further via mutual recognition procedure
ZEAMX	PYRUNU	**PL**	**0.3**	-
		CZ, DE, HU, RO	0.3	To be submitted further via mutual recognition procedure
	DIABVI	HU, RO	0.2	To be submitted further via mutual recognition procedure
TRZAW	LEMAME	RO	0.15-0.2	To be submitted further via mutual recognition procedure

Further details are in the table “All intended uses” in Part B - Section 0.

Description of the target pests

Table 3.2-2: Glossary of pests mentioned in the dossier.

EPPO code	Scientific name	Common name
CEUTAS	*Ceutorhynchus obstrictus*	Cabbage seed weevil
CEUTNA	*Ceutorhynchus napi*	Rape stem weevil
CEUTQU	*Ceutorhynchus pallidactylus*	Cabbage stem weevil
CEUTSP	*Ceutorhynchus sp.*	Weevils
DASYBR	*Dasineura brassicae*	Brassica pod midge
DIABVI	*Diabrotica virgifera virgifera*	Western corn rootworm
LEMAME	*Oulema melanopus*	Cereal leaf beetle
MELIAE	*Brassicogethes aeneus*	Pollen beetle
PYRUNU	*Ostrinia nubilalis*	European corn borer

Key targets for this product are named insect pests, found in cereals, corn and oilseed rape.

<u>Oilseed rape</u>

***Ceutorhynchus napi* (rape stem weevil) CEUTNA**

C. napi (rape stem weevil) is present in many European countries. Adults of *C. napi* overwinter in ground around plants where they have finished their development and where they pupate. Adults occur very early, in February and March and begin to fly when temperatures exceed 9°C. The flight is the most intensive at a temperature of 12-15°C. Adults of rape stem weevil colonize host plants (oilseed rape and other plants of the Brassica family) and feed additionally with leaves and stems where they make needle like cavities. Adults remain within their earthen chambers and do not emerge until the following spring. Infested tissue is often invaded by secondary organisms, like fungal pests. Greater damage occurs if, at the end of March, an intensive growth of the plants has not begun.

***Ceutorhynchus assimilis* (cabbage seed weevil) CEUTAS**

Seed weevils invade oilseed rape crops as temperatures increase during May. After about three weeks of feeding the females begin to lay eggs in the pods and this continues until the seeds are formed. When fully fed the larvae leave the pods to pupate in the soil with the adults emerging later in the summer. The cabbage seed weevil has one generation per year.

Cabbage seed weevils are widespread although they are generally considered to be less abundant than in previous years. Adult feeding on the young flowers and pods has little impact on yield, so treatment is not necessary during migration into crops. Larvae feeding in the pods can damage up to a quarter of the developing seeds and where a high percentage of pods have been affected this can equate to an overall yield loss of 5-10 %, however additional yield losses may result from brassica pod midge which can exploit feeding damage and egg laying scars to deposit their eggs.

Spray thresholds vary from 0.5-1.0 adults per plant.

***Ceutorhynchus pallidactylus* (cabbage stem weevil), also known as *C. quadridens* CUETQU**

Cabbage stem weevils (*Ceutorhynchus quadridens*) are often confused with cabbage seed weevils (*Ceutorhynchus assimilis*), as their timing on rape crops overlap to some extent. Whilst seed weevils are a slate grey colour, cabbage stem weevils are a dull grey or rust-brown colour.

Cabbage stem weevils lay eggs in leaf petioles or directly into the stem of plants in the spring, and the grubs tunnel their way into the mid-rib of the leaf or the stem. The damage caused by cabbage stem weevil is usually insufficient to directly damage the plant; some fungal diseases such as stem canker can gain access to the stem through larval exit holes made as they leave the plant to pupate.

***Dasineura brassicae* (brassica pod midge) DASYBR**

The brassica pod midge is a small fly, up to 2 mm long. The larvae are also about 2 mm long, white/pale yellow and do not have legs or a defined head.

Brassica pod midge lay their eggs within developing oilseed rape pods. They utilise holes in developing oilseed rape pods for egg-laying, and these holes may be due to feeding or oviposition punctures by cabbage seed weevil, feeding punctures by other insects such as capsids, or by physical/mechanical damage. On hatching, the small larvae feed on the inside of the pod wall, leading to distorted pods which eventually lead to pod-shatter and loss of seed.

The adults emerge from cocoons in the soil in late spring. After mating the short lived females lay up to 60 eggs per pod. After feeding, the larvae leave the distorted and twisted pods to pupate in cocoons in the soil. Two generations can be produced each summer and the second generation can move onto later flowering brassicas as well as overwintering in sheltered locations.

A decision to protect crops from damage from the brassica pod midge will depend on the activity and presence of the cabbage seed weevil.

***Meligethes/Braccicogethes aeneus* (pollen beetle) MELIAE**

Pollen beetle adults are small (approximately 2.5 mm), metallic greenish-black and have clubbed antennae. Females bite slits in the base of oilseed rape buds and lay their eggs inside.

The beetles eat flower petals, pollen, pistils, stamens, nectar, and ovaries. Damaged flowers dry up In oilseed rape, adult and larval feeding can lead to bud abortion and reduced pod set. This damage rarely results in reduced yields for winter crops. Spring crops are more vulnerable, as the susceptible green/yellow bud stage often coincides with beetle migration.

Crops are usually most at risk when the weather is dry and warm (above 15°C).

The damage-susceptible stage of the oilseed rape crop is green to yellow bud; oilseed rape will usually compensate for early damage by producing more and larger seeds on lower racemes. Once the crop is in flower, it is no longer at risk.

Treatment thresholds for winter and spring oilseed rape are based on the maximum number of buds each beetle can destroy and the number of excess flowers produced by different plant populations – low plant population crops produce more branches and, therefore, more flowers.

Maize

***Ostrinia nubialis* (European corn borer) PYRUNU**

Adults of the European corn borer (ECB) are widespread in Europe, western and central Asia, northern Africa, and introduced into North America. The ECB causes the greatest damage to maize as well as millet, hemp and hop; it is capable of injuring peppers, sorghum, soy-bean, and cotton

The European corn borer lives and feeds primarily on field corn, but also eats sweet corn, popcorn, and seed corn. The first generation of corn borers, which develops during the late spring, feeds on the leaves and stalks of corn plants. In addition, the second generation feeds on the ear of corn, the leaf sheath, and the ear shank. If a third generation is produced, it will feed on the ear, the leaf sheath, and the ear shank

***Diabrotica virgifera virgifera* (corn rootworm) DIABVI**

Larvae hatch in late May or early June and begin to feed on corn roots. Corn rootworms go through three larval instars, pupate in the soil and emerge as adults in July and August. One generation emerges each year. Larvae have brown heads and a brown marking on the top of the last abdominal segment, giving them a double-headed appearance. Larvae have three pairs of legs, but these are not usually visible without magnification. After feeding for several weeks, the larvae dig a cell in the soil and molt into the pupal stage. The pupal stage is white and has the basic shape of the adult. Adult rootworms are about 6.4 mm long.

Rootworm larvae can complete development only on corn and a few other species of grasses. Adults feed primarily on corn silk, pollen and kernels on exposed ear tips, although they will feed on leaves and pollen of other plants. Adults may feed on leaf tissue, scraping away the green surface tissue and leaving a window-pane appearance. However, adults quickly shift to preferred green silks and pollen as they become available.

Most of the damage to corn is caused by larval feeding. Hatchlings locate roots and begin feeding on the fine root hairs, burrowing into root tips. As larvae grow, they feed on and tunnel into primary roots. When rootworms are abundant, larval feeding and deterioration of injured roots by root rot pests can result in roots being pruned to the stalk base. Severe root injury interferes with the roots' ability to transport water and nutrients, reduces growth and results in reduced grain production. Severe root injury may result in lodging of corn plants, making harvest more difficult. Silk feeding by adults can result in pruning at the ear tip, commonly called silk clipping. In field corn, beetle populations are occasionally high enough to cause severe silk clipping during pollen shed, which may interfere with pollination.

Wheat

***Oulema melanopus* (cereal leaf beetle) LEMAME**

The adults are 4-5 mm long, with black heads, red thorax, blue/green metallic coloured wing cases and red/orange legs. The larvae are 'slug like' in appearance with yellow/brown humped bodies which are covered with a jelly/slimy external texture (a mixture of mucus and excreta) the purpose of which is to mimic bird or large insect droppings. The larvae are very slow moving and on close inspection 3 pairs of legs can be found near to the head.

O. melanopus consumes nearly all cereal crops, but has a strong affinity for oats, barley, and rye, and its favourite host is wheat. The physical symptoms of the plant caused by them are thin, long lines where the upper epidermis of the leaf has been eaten. Since the beetle is migratory when it eats, it is not consistent within a field.

Table 3.2-3: Major / minor status of intended uses (for all cMS and zRMS).

Crop and/or situation	Crop status		Pests or group of pests controlled	Pest status	
	Major	minor		Major	minor
BRSNW	CZ, DE, HU, PL, RO, UK	-	MELIAE	CZ, DE, HU, PL, RO, UK	-
			CEUTNA	CZ, DE, HU, PL, RO	UK
			CEUTAS	CZ, DE, HU, PL, RO, UK	-
			CEUTQU	CZ, DE, HU, PL, RO	UK
			DASYBR	CZ, DE, HU, PL, RO	UK
TRZAW	CZ, DE, HU, PL, RO, UK	-	LEMAME	RO, DE	CZ, HU, PL, UK
ZEAMX	CZ, DE, HU, PL, RO, UK	-	PYRUNU	CZ, DE, HU, PL, RO	UK
			DIABVI	CZ, DE, HU, PL, RO	UK

Compliance with the Uniform Principles

The assessment was conducted according to the Uniform Principles.

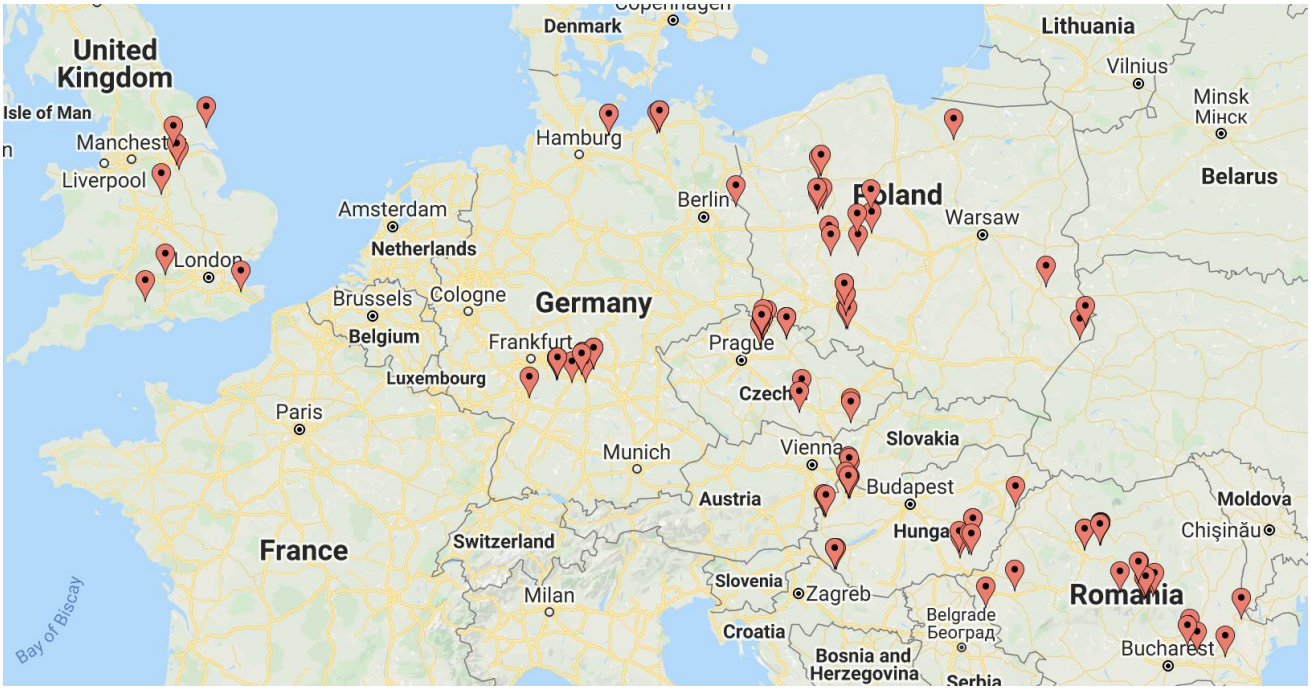
Information on trials submitted (3.1 Efficacy data)

The following table aims to give an overview of submitted trials. The list of all individual trials is detailed in the BAD.

Table 3.2-4: Presentation of trials (efficacy trials, MED trials)

Targets	Crop/ situation	Country	Years	Type of trial	Number of trials (number of valid trials)			GEP, non-GEP, official	Comments (any other relevant information)
					Maritime zone	South-eastern zone	North-eastern zone		
Insect pests	BRSNW	CZ	2017	MED, E	2 (2)			GEP	
	BRSNW		2018		6 (6)				
	ZEAMX		2018		2 (2)				
	BRSNW		2019		2 (2)				
					12 (12)			**GEP**	
	BRSNW	DE	2018		4 (4)				
	BRSNW		2019		3 (3)				
					7 (7)			**GEP**	
	BRSNW	HU	2017	MED, E		2 (2)		GEP	
	ZEAMX		2017			1 (1)			
	BRSNW		2018			7 (7)			
	ZEAMX		2018			4 (4)			
	BRSNW		2019			4 (4)			
						18 (18)		**GEP**	
	BRSNW	PL	2017	MED, E			6 (6)	GEP	
	ZEAMX		2017				3 (3)		
	BRSNW		2018				8 (8)		
	ZEAMX		2018				2 (2)		
	BRSNW		2019				2 (2)		
							21 (21)	**GEP**	
	BRSNW	RO	2017	MED, E		2 (2)		GEP	
	ZEAMX		2017			1 (1)			
	BRSNW		2018			4 (4)			
	ZEAMX		2018			3 (3)			
	BRSNW		2019			7 (7)			
	TRZAW		2019			6 (6)			
						23 (23)		**GEP**	
	BRSNS	UK	2018	MED, E	1 (1)			GEP	
	BRSNW		2018		1 (1)				
	BRSNW		2019		2 (2)				
					4 (4)			**GEP**	
TOTAL	-	-		-	**23 (23)**	**41 (41)**	**21 (21)**	-	

Figure 3.2-1: Trial locations in the Maritime/South-eastern/North-eastern Zones



All trials were conducted in areas of commercial winter wheat, corn and oilseed rape, rather than specially-planted areas of crops. These trials are therefore truly representative of the performance of LEPTOSAR 200 SL in the conditions for which it is intended.

Sites were selected because of the high insect pest infestation levels that were present at application, or were expected due to the crop situation or location, or warnings from commercial agronomy organisations.

In this submission, data are included from trials conducted in Germany, Czech Republic, Hungary, Poland, Romania and the United Kingdom (Central European Zone).

For submission to the Central Zone, field data for the Maritime, North-eastern and South-Eastern climatic zones are considered relevant, as these climatic zones lie within the boundaries of the Central Zone.

The data presented in this submission indicate that the performance of LEPTOSAR 200 SL is consistent across the different countries of the Central Zone.

Table 3.2-7: Presentation of reference standards used in ALL trials

Crop(s)	Reference standard	Country(ies) where the product is registered (1)	Authorization number	Active substance(s)	Formulation		Registered application rate(3)	Application rate in trials (per treatment)	Remark(4)
					Type(2)	Concentration of a.s.			
BRSNW	Apis 200 SE	PL, CZ, HU	R-34/2017d (PL) 5385-0 (CZ) 04.2/1202-1/208.NÉBIH (HU)	Acetamiprid	SE	200g/L	PL: 0.15L/ha HU 0.2L/ha CZ, PL 0.25L/ha	0.15, 0.2, 0.25L/ha	
ZEAMX	Fastac Active	RO	097PC/21.01.2015 (RO)	Alpha-cypermethrin	ME	50g/L	0.6L/ha	0.6L/ha	
BRSNW	Hallmark with Zeon Tech-nology	UK	MAPP 12629 (UK)	Lambda-cyhalothrin	CS	100g/L	0.075L/ha	0.075mL/ha	
ZEAMX	Inazuma	HU	04.2/7-1/2012. MgSzH, 04.2/9267-2/2015 NÉBIH (HU)	Acetamiprid + Lambda-cyhalothrin	WG	100 + 30g/kg	0.2kg/ha	0.2kg/ha	
BRSNS, BRSNW	InSyst	UK	MAPP 13414 (UK)	Acetamiprid	SP	20%w/w	0.2kg/ha	0.2kg/ha	
ZEAMX	Karate SE ZeonTechnol-ogyY 050 CS	PL. CZ	R-538/2016d – 23.11.2016 (PL) 4419-3 (CZ)	Lambda-cyhalothrin	CS	50g/L	PL 0.2L/ha CZ 0.25L/ha	0.2, 0.25L/ha	
TRZAW	Karate Zeon	RO	1812/04.12.1997 (RO)	Lambda-cyhalothrin	CS	50g/L	0.15L/ha	0.15L/ha	
ZEAMX	Karate Zeon	RO	1812/04.12.1997 (RO)	Lambda-cyhalothrin	CS	50g/L	0.25L/ha	0.25L/ha	
BRSNW	Karate Zeon	DE	024675-00 (DE)	Lambda-cyhalothrin	CS	100g/L	0.075L/ha	0.075mL/ha	
BRSNW	Mospilan	HU, DE, RO	04.2/2883-1/2011 MgSzH, • 04.2/2636-2/2013 NÉBIH R- 37/2008 29.04.2008 (HU) 005655-00 (DE) 2016 din 02.03.2006 (RO)	Acetamiprid	SG	20% w/w	RO, HU, 0,2 kg/ha DE 0.2kg/ha	0.12, 0.15, 0.2kg/ha	
ZEAMX	Mospilan	HU	04.2/2883-1/2011 MgSzH, • 04.2/2636-2/2013 NÉBIH (HU)	Acetamiprid	SG	20% w/w	HU, 0.15kg/ha	0.15kg/ha	
BRSNW	Mospilan	CZ, PL,	33445 (CZ) R-333/2017d-10.07.2017 (PL)	Acetamiprid	SP	20%w/w	CZ, 0,18 kg/ha |PL: 0.25kg/ha	0.12, 0.15, 0.2, 0.25, kg/ha	

(1) only on use(s) applied for (with the test product).
(2) e.g. WP (wettable powder), EC (emulsifiable concentrate), etc.
(3) dose(s) / dose range authorized on that use in the country.
(4) Other relevant information (e.g. uses, number of applications, spray volume, method of application, etc.).

Comments of zRMS:	This report summarizes the information concerning the use of LEPTOSAR 200 SL, a post-emergence foliar-applied insecticide for the control of a range of insect pests used in cereals, corn and oilseed rape. The product contains 200 g/L of the active substance acetamiprid and is formulated as a soluble concentrate (SL). The active substance acetamiprid is included in the Annex to Commission Implementing Regulation (EU) No 540/2011 containing the active substances approved for use in plant protection products under Regulation (EC) No 1107/2009 with the expiration of approval on 28/02/2033. According to general provisions applying to all substances listed in the Annex to commission Implementing Regulation (EU) No 540/2011 of 25 May 2011 implementing Regulation (EC) No1107/2009 of the European Parliament and of the Council as regards the list of approved active substances. Specific provisions of Regulation (EU) No 540/2011 were as follows: For the implementation of the uniform principles, as referred to in Article 29(6) of Regulation (EC) No 1107/2009, the conclusions of the renewal report on acetamiprid, and in particular Appendices I and II thereof, shall be taken into account. In their overall assessment Member States shall pay particular attention to: — the risk to aquatic organisms, bees and other non-target arthropods, — the risk to birds and mammals, — the risk to consumers, — the risk to operators. Conditions of use shall include risk mitigation measures, where appropriate. Appendix 1 of BAD contains the list of data considered in support of the evaluation of LEPTOSAR 200 SL Appendix 2 of BAD contains the table of intended uses (GAP) for LEPTOSAR 200 SL

3.2.1 Preliminary tests (KCP 6.1)

The active substance (acetamiprid) in this product has been developed and approved for use in agriculture by other major agrochemical companies. The results of preliminary screening trials in the laboratory and glasshouse are not available to the applicant and consequently are not included in this biological dossier.

The product dose rate is justified by the minimum effective dose data.

The insecticidal activity of this compound has therefore been widely researched and proven in commercial use in countries across Europe, as well as the chemistry and biology of acetamiprid is already well understood. Therefore, based on this no specific, preliminary/screening tests have been undertaken with LEPTOSAR 200 SL.

Comments of zRMS:	Preliminary tests are not reported. The active substance acetamiprid has well been known and used in many authorised products with a known range of action.

3.2.2 Minimum effective dose tests (KCP 6.2)

A total programme of 85 replicated trials was conducted across Europe from 2017-2019.

Use rates of 0.1-0.3L/ha of LEPTOSAR 200 SL were used in the trials, in order to comply with to EPPO standard PP 1/225 '*Minimum effective dose'*.

Pest levels required for the assessments were consistent with the specific EPPO guidance. The most important factor was the evenness of the infestation, particularly at the lower levels of infestation, and the response of the pest to the reference product.

CEUTNA in BRSNW

A total of 22 trials, in which CEUTNA was were conducted in winter oilseed rape, in Czechia, Germany, Hungary, Romania and Poland, in three EPPO climatic zones. LEPTOSAR 200 SL was tested at 0.1 to 0.3L/ha (20 – 60 g of active substance) in BRSNW for the control of CEUTNA.

Assessments were conducted on the whole plant.

Reference products were Mospilan at 0.15-0.25 kg/ha, Apis 200 SE at 0.25L/ha and Karate Zeon at 0.075L/ha.

Control values for the assessments of larvae per plant were generated using the Abbott method.

The key assessment of this pest is the number of larvae per plant, as this avoids confusion due to adults moving into the crop.

A summary of the dose response results is provided in Table 3.2-8.

Overall control of larvae indicated that the 0.25L/ha rate is the minimum for acceptable control in the majority of cases, with an overall control level of 82%. The 0.2L/ha rate may be sufficient in some situations. It was clear that the 0.1 and 0.15L/ha rates were clearly insufficient, as control levels in many of these assessments were inferior to those achieved by the reference products.

Use rates should be tailored according to the following proposal:

- Maritime zone: Czechia 0.25-0.3L/ha; Germany 0.3L/ha
- North-eastern zone: 0.2-0.3L/ha
- South-eastern zone: 0.2-0.3L/ha

Table 3.2-8: Minimum effective dose. Efficacy of LEPTOSAR 200 SL at a range of rates against CEUTNA in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.10 L/ha			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max
CEUTNA in BRSNW; larvae per plant	MA	5	**0.54**	0.1	1.23	**69.2**	29.7	100.0	**75.0**	37.7	100.0	**77.4**	50.5	100	**80.3**	50.2	100	**85.7**	65.2	100
	NE	7	**3.7**	2.1	8.6	**48.2**	44.0	58.7	**63.0**	51.4	76.0	**76.5**	66.4	86.4	**85.6**	81.1	91.0	**89.4**	82.4	97.3
	SE	10	**4.8**	1.5	12.1	**61.9**	51.7	75.5	**71.5**	50.3	80.6	**79.4**	57.4	88.0	**81.4**	60.9	89.5	**84.7**	70.5	91.5
	ALL	22	**3.5**	0.1	12.1	**59.2**	29.7	100.0	**69.6**	37.7	100.0	**78.0**	50.5	100	**82.5**	50.2	100	**86.4**	65.2	100

CEUTAS in BRSNW

A total of 17 trials in which CEUTAS was were conducted in winter oilseed rape, in Czechia, Germany, Hungary, Romania, Poland and the United Kingdom, in three EPPO climatic zones.

Reference products were Mospilan at 0.15-0.20 kg/ha, Apis 200 SE at 0.25L/ha and Hallmark Zeon or Karate Zeon at 0.075L/ha.

Assessments were conducted on leaves, pods, stems or on the whole plant.

For assessments of adults the data were transformed using the Henderson-Tilton method. Control values for the assessments of holes in pods were generated using the Abbott method. The key assessment for this pest is the number of larvae per pod at 21-28 DAT, which gives a clear indication of the damage done to the crop by this pest. However, not in each conducted trial this assessment were available or valid, due to eg. too low pest pressure at this assessment.

Counts of the numbers of larvae per pod followed the trend of the reduction in holes in pods, with results from 0.1 L/ha clearly inferior and the 0.3L/ha rate useful in certain situations. The 0.15L/ha rate may be sufficient in some situations, e.g. in the North-eastern zone.

Use rates should be tailored according to the following proposal:

- Maritime zone: Czechia 0.2-0.3L/ha; Germany 0.3L/ha
- North-eastern zone: 0.15-0.3L/ha
- South-eastern zone: 0.2-0.3L/ha

A summary of the dose response results is provided in Table 3.2-9.

Table 3.2-9: Minimum effective dose. Efficacy of LEPTOSAR 200 SL at a range of rates against CEUTAS in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.10 L/ha			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max
CEUTAS in BRSNW; larvae per pod 21-28 DAT	MA	4	**1.7**	0.1	6.3	**44.9**	23.8	71.4	**54.9**	33.3	73.8	**63.0**	44.4	57.5	**56.2**	28.3	79.7	**71.2**	55.3	88.2
	NE	6	**0.4**	0.3	0.6	**68.0**	61.7	71.2	**80.5**	70.9	86.0	**87.0**	76.5	93.6	**91.4**	80.1	100	**92.1**	81.0	100
	SE	6	**1.2**	0.1	3.0	**49.0**	25.4	73.2	**58.6**	30.6	80.4	**74.6**	59.0	84.0	**80.0**	74.2	89.0	**83.8**	77.5	90.9
	ALL	16	**1.0**	0.1	6.3	**55.1**	23.8	73.2	**65.9**	30.6	86.0	**76.3**	44.4	93.6	**78.3**	28.3	100	**83.8**	55.3	100

CEUTQU in BRSNW

A total of 19 trials in which CEUTQU was were conducted in winter oilseed rape, in Czechia, Germany, Hungary, Romania, Poland and the United Kingdom, in three EPPO climatic zones.

Reference products were Mospilan at 0.0.12-0.25 kg/ha, Apis 200 SE at 0.25L/ha and Karate Zeon at 0.075L/ha.

Assessments were conducted on the whole plant.

Control values for the assessments of larvae per plant were generated using the Abbott method.

The key assessment of this pest is the number of larvae per plant, as this avoids confusion due to adults moving into the crop.

Counts of the numbers of larvae per pod followed the trend of the reduction in holes in pods, with results from 0.1 and 0.15L/ha clearly inferior and the 0.3L/ha rate useful in certain situations.

Use rates should be tailored according to the following proposal:

- Maritime zone: Czechia 0.2-0.3L/ha; Germany 0.3L/ha
- North-eastern zone: 0.2-0.3L/ha
- South-eastern zone: 0.2-0.3L/ha

A summary of the dose response results is provided in Table 3.2-10.

Table 3.2-10: Minimum effective dose. Efficacy of LEPTOSAR 200 SL at a range of rates against CEUTQU in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.10 L/ha			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max
CEUTQU in BRSNW; larvae per plant	MA	4	**0.8**	0.3	1.1	**53.2**	31.3	68.3	**53.8**	33.3	69.3	**59.3**	35.4	75.0	**67.3**	557.2	79.5	**72.1**	57.8	84.0
	NE	7	**2.6**	0.2	6.2	**49.6**	44.1	62.3	**67.0**	57.0	74.9	**80.9**	69.9	88.3	**88.4**	78.1	93.7	**93.1**	86.3	98.0
	SE	8	**6.3**	2.8	10.9	**66.1**	60.7	72.0	**73.2**	66.8	78.7	**79.3**	71.3	88.2	**83.4**	76.4	89.4	**84.7**	79.6	90.1
	ALL	19	**3.8**	0.2	10.9	**57.3**	31.3	72.0	**66.8**	33.3	78.7	**75.7**	35.4	88.3	**81.9**	57.2	93.7	**85.1**	57.8	98.0

CEUTSP in BRSNW

A total of 18 trials in which CEUTSP not identified at the time of assessment was present were conducted in winter oilseed rape, in Czechia, Germany, Hungary, Romania and Poland, in three EPPO climatic zones. These assessments are supportive of the data for CUETAS and CUETQU summarised above.

Reference products were Mospilan at 0.15-0.25 kg/ha, Apis 200 SE at 0.25L/ha and Karate Zeon at 0.075L/ha.

Assessments were conducted on pods or on the whole plant, counting the number of holes in the relevant plant part, without identifying the species that caused the holes.

Control values for the assessments of holes in pods and plants were generated using the Abbott method.

The key assessment in this case is that of the number of holes per plant.

Overall reduction of the number of holes in plants indicated that the 0.25L/ha rate is the minimum for acceptable control, with an overall control level of 72%, but the 0.3L/ha rate may be required for certainty.

These data are useful support for the control claims for the named *Ceutorhynchus* species.

A summary of the dose response results is provided in Table 3.2-11.

Table 3.2-11: Minimum effective dose. Efficacy of LEPTOSAR 200 SL at a range of rates against CEUTSP in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.10 L/ha			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max
CEUTSP; holes per plant	MA	2	**2.0**	1.9	2.1	**25.3**	0.0	50.5	**28.5**	17.2	39.8	**39.6**	22.9	56.3	**47.5**	42.4	52.6	**44.7**	28.8	60.5
	NE	5	**1.6**	1.4	2.2	**36.4**	14.7	47.4	**55.9**	36.7	68.6	**72.6**	65.5	77.9	**82.5**	77.0	86.5	**90.7**	78.1	97.5
	SE	10	**3.7**	0.3	6.2	**50.8**	10.3	72.4	**58.3**	21.5	79.9	**62.6**	12.5	86.9	**66.3**	21.2	86.3	**70.4**	283	88.8
	ALL	17	**2.8**	0.3	6.2	**46.3**	0.0	72.4	**57.2**	17.2	79.9	**66.2**	12.5	86.9	**72.5**	21.2	86.5	**77.2**	28.3	97.5

DASYBR in BRSNW

A total of 18 trials in which DASYBR was were conducted in winter oilseed rape, in Czechia, Hungary, Romania, Poland and the United Kingdom, in three EPPO climatic zones.

Reference products were Mospilan at 0.12-0.30 kg/ha, Apis 200 SE at 0.2-0.25L/ha and Hallmark Zeon at 0.075L/ha.

Assessments were conducted on pods, either of the damage per pod (% damage incidence) or the number of larvae per pod.

For the majority of assessments the data were transformed using the Henderson-Tilton method. Where no plot-by-plot assessment was conducted at the first application, data were transformed by the Abbott method. In trial A-200SL-OR3-CPd_CZ19_3 almost every pod was damaged at application, so subsequent assessments of % damaged pods were worthless.

The key assessment of this pest/crop combination is that of the number of larvae per pod at 21-22 DAT, which gives a clear indication of the damage done to the crop by this pest. However, not in each conducted trial this assessment were available or valid, due to eg. too low pest pressure at this assessment.

Assessments of larvae per pod reflected the dose response of the pod damage assessments, as might be expected. Counts of the numbers of larvae per pod followed the trend of the reduction in pod damage.

Use rates should be tailored according to the following proposal:

- Maritime zone: Czechia 0.2-0.3L/ha; Germany 0.3L/ha
- North-eastern zone: 0.15-0.3L/ha
- South-eastern zone: 0.2-0.3L/ha

A summary of the dose response results is provided in Table 3.2-12.

Table 3.2-12: Minimum effective dose. Efficacy of LEPTOSAR 200 SL at a range of rates against DASYBR in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.10 L/ha			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max
DASYBR; larvae per pod 21-22 DAT	MA	5	**3.2**	1.3	8.7	**48.8**	18.4	73.3	**53.8**	35.2	73.1	**57.8**	29.6	75.6	**65.0**	39.3	80.8	**71.8**	40.7	88.6
	NE	4	**5.6**	3.7	6.6	**74.9**	71.6	77.7	**77.9**	74.1	83.7	**80.9**	75.0	95.4	**82.6**	77.0	96.1	**82.6**	75.2	97.4
	SE	5	**2.7**	1.0	6.0	**51.3**	2.8	79.9	**62.5**	15.4	90.0	**80.2**	64.6	93.3	**86.0**	65.9	97.3	**87.8**	65.9	98.3
	ALL	14	**3.7**	1.0	8.7	**51.3**	2.8	79.9	**63.8**	15.4	90.0	**72.4**	29.6	95.4	**77.5**	39.3	97.3	**80.6**	40.7	98.3

MELIAE in BRSNW

A total of 20trials in which MELIAE was were conducted in winter oilseed rape, in Czechia, Germany, Hungary, Romania, Poland and the United Kingdom, in three EPPO climatic zones. In the majority of trials the pest was absent at application.

Reference products were Mospilan at 0.12-0.30 kg/ha, Apis 200 SE at 0.25L/ha and InSyst at 0.2kg/ha.

Assessments were conducted on shoots or on the whole plant.

For assessments of adults the data were transformed using the Henderson-Tilton method.

The key assessment of this pest is the number of adults per plant at 1-2 DAT, which eliminates any influence from the movement of adults into the crop after application.

Overall control of adults in the early (1-2 DAA) assessments indicated that the 0.2L/ha rate is the minimum for acceptable control in every situation, with an overall control level of 79%. The 0.15L/ha rate may be sufficient in some situations, *e.g*. in the North-eastern zone.

Use rates should be tailored according to the following proposal:

- Maritime zone: Czechia 0.2-0.3L/ha; Germany 0.3L/ha
- North-eastern zone: 0.15-0.3L/ha
- South-eastern zone: 0.2-0.3L/ha

A summary of the dose response results is provided in Table 3.2-13.

Table 3.2-13: Minimum effective dose. Efficacy of LEPTOSAR 200 SL at a range of rates against MELIAE in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.10 L/ha			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha		
			MEAN	**Min**	**Max**	**MEAN**	**Min**	**Max**	**MEAN**	**Min**	**Max**	**MEAN**	**Min**	**Max**	**MEAN**	**Min**	**Max**	**MEAN**	**Min**	**Max**
MELIAE; adults per plant 1-2 DAT	MA	7*	**4.8**	2.1	9.0	**60.7**	38.2	75.1	**68.4**	49.2	92.0	**75.1**	52.8	90.2	**75.2**	51.4	91.2	**82.5**	53.9	95.6
	NE	5	**4.6**	2.3	9.6	**51.2**	42.2	62.4	**71.3**	51.8	84.1	**79.5**	61.9	90.1	**84.6**	69.4	93.2	**87.9**	72.0	96.0
	SE	8	**4.9**	3.4	5.8	**53.2**	12.2	77.1	**65.2**	35.6	83.9	**79.9**	45.5	89.3	**82.5**	48.5	91.8	**87.6**	74.1	93.87
	ALL	20	**4.8**	2.1	9.6	**55.3**	12.2	77.1	**67.8**	35.4	92.0	**78.1**	45.5	93.2	**80.5**	48.5	93.2	**86.4**	53.9	95.7

*Five trials only at 0.3L/ha in Maritime zone

PYRUNU in ZEAMX

A total of 11 trials in which PYRUNU was present were conducted in maize in Czechia, Hungary, Romania and Poland, in three EPPO climatic zones.

Reference products were Fastac Active 0.6L/ha, Inazuma 0.2kg/ha, Karate Zeon at 0.2 and 0.25L/ha.

Assessments were conducted on corn husks or on the whole plant.

For assessments of control the data were transformed using the Abbott method.

The key assessment of this pest/crop combination is the second assessment of the total number of plants damaged, as this gives the clearest indication of the reduction in pest damage.

The 0.15L/ha and 0.2L/ha rates were insufficient; the 0.3L/ha rate is therefore the minimum which can be used for control of this pest in maize.

A summary of the dose response results is provided in Table 3.2-14.

Table 3.2-14: Minimum effective dose. Efficacy of LEPTOSAR 200 SL at a range of rates against PYRUNU in ZEAMX

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.3 L/ha		
			MEAN	**Min**	**Max**	**MEAN**	**Min**	**Max**	**MEAN**	**Min**	**Max**	**MEAN**	**Min**	**Max**
PYRUNU; % total plants damaged 48-94 DAT	MA	2	**52.5**	52.5	52.5	**33.8**	30.8	36.8	**52.8**	41.3	64.2	**74.4**	73.3	75.5
	NE	5	**67.8**	60.0	73.8	**42.7**	36.1	57.3	**59.5**	51.8	62.7	**71.1**	69.9	72.3
	SE	4	**57.3**	18.8	87.5	**26.2**	7.7	50.0	**40.3**	11.0	67.4	**61.5**	49.8	74.2
	ALL	11	**61.2**	18.8	87.5	**35.1**	7.7	57.3	**51.3**	11.0	67.4	**68.2**	49.8	75.5

DIABVI in ZEAMX

A total of 5 trials in which DIABVI was present were conducted in maize, in Hungary and Romania, in the South-eastern EPPO climatic zone.

The reference products were Karate Zeon at 0.25L/ha or Mospilan at 0.15-0.2kg/ha.

Assessments were of the number of larvae per plot, or the number of adults found on 30 plants or in one or three traps. The pest populations are therefore not comparable from trial to trial. For the majority of assessments the data were transformed using the Henderson-Tilton method; for one this was not appropriate as the pest was not present at the time of application, and the results for this trial were calculated using the Abbott method.

Assessment presented below summarise the highest level of control achieved during the course of the trial.

Overall summary of all assessments indicated that LEPTOSAR 200 SL achieved ca. 80 % control of DIABVI. The dose response was consistent, with an indication that the lowest rate tested (0.1L/ha) was inferior to the 0.15 L/ha rate

A summary of the dose response results is provided in Table 3.2-15.

Table 3.2-15: Minimum effective dose. Efficacy of LEPTOSAR 200 SL at a range of rates against DIABVI in ZEAMX

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.10 L/ha			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha		
			MEAN	**Min**	**Max**	**MEAN**	**Min**	**Max**	**MEAN**	**Min**	**Max**	**MEAN**	**Min**	**Max**
DIABVI; best assessment timing	SE (ALL)	5	**13.7**	4.1	40.9	**75.8**	45.0	100.0	**79.3**	36.0	100.0	82.7	**52.2**	100.0

LEMAME in TRZAW

A total of six trials in which infestations of cereal leaf beetle in winter wheat were present, were conducted in Romania in 2019. In every trial the pest was present at application. The reference product in every trial was Karate Zeon at 0.15L/ha.

All trials were conducted in a single EPPO zone. Assessments were analysed using the THT method. Key assessments were 3 DAA and 8-9 DAA.

The key assessment of this pest/crop combination is that of the number of adults per leaf at 3DAT, which indicates the control of those adults present at application but avoids the influence of any adults arriving in the crop after spraying.

Overall summary of all assessments indicated that LEPTOSAR 200 SL achieved *c.* 95% control of LEMAME at 0.2 L/ha, declining slightly to *c.* 90% at 0.15 L/ha, and to *c.* 85% at 0.1 L/ha. The dose response was consistent across the trials. At the 0.2L/ha rate the product was equal or superior to the reference product, in every assessment in every trial.

This indicates that the MED for this pest is 0.15L/ha, with 0.2L/ha required for long-term control in higher pest infestation levels.

A summary of the dose response results is provided in Table 3.2-16.

Table 3.2-16: Minimum effective dose. Efficacy of LEPTOSAR 200 SL at a range of rates against LEMAME in TRZAW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.10 L/ha			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha		
			MEAN	**Min**	**Max**	**MEAN**	**Min**	**Max**	**MEAN**	**Min**	**Max**	**MEAN**	**Min**	**Max**
LEMAME; adults per plant 3 DAT	SE (ALL)	6	**1.3**	0.4	1.9	**86.5**	82.6	91.0	**91.9**	90.0	93.3	**96.2**	95.0	97.0

Summary and conclusions on the minimum effective dose

LEPTOSAR 200 SL has been evaluated in a number of countries over a number of seasons, a variety of climatic conditions and with a range of application timings and rates.

The trials results indicate that the product can achieve high levels of control of insect pests in cereals, corn and oilseed rape.

Comparison of the dose responses across a range of pests, as well as the three climatic regions is possible with this data set, and confirms that use rates of the product should be varied according to the pest and crop, and also according to the pest pressure. Control of insect pests declines with use rate, and becomes more variable as the use rate is reduced.

It is submitted that based on the data presented in this dossier LEPTOSAR 200 SL can be approved for use on cereals, corn and oilseed rape at the recommended use rates.

comments of zRMS: dRR point 3.2.2	**Minimum effective dose tests** The dose rates justification of LEPTOSAR 200 SL is supported by data from 85 field efficacy trials. Trials were carried out in the Maritime, SE and NE EPPO zones on winter oilseed rape, corn, winter wheat for the control of insects pests, in 2017, 2018 and 2019. In the trials dose rates of LEPTOSAR 200 SL applied post-emergent were tested:0,1 l/ha; 0,15 l/ha; 0,2 l/ha; 0,25 l/ha and 0,3 l/ha. The use rates of the product varied according to the pest, crop and the pest pressure. The following does rates have demonstrated a good pest control and were considered as the minimum effective doses: - CEUTNA – 0,2 – 0,3 l/ha - CEUTAS - 0,15 – 0,3 l/ha - CEUTQU - 0,2 – 0,3 l/ha - CEUTSP – 0,25 l/ha – supportive for CEUTAS and CEUTQU - DASYBR – 0,15 – 0,3 l/ha - MELIAE - 0,15 – 0,3 l/ha - PURUNU - 0,3 l/ha - LEMAME - 0,15 – 0,3 l/ha

3.2.3 Efficacy tests (KCP 6.2)

A total programme of 85 replicated trials was conducted across Europe from 2017-2019.
All trials were conducted to the principles of Good Experimental Practice (GEP). The conduct, analysis and reporting of the trials is according to the following EPPO guidelines, using the versions current at the time of the trial.

Table 3.2-17: Details on trial methodology MED/Efficacy trials, valid trials only

It Guidelines	General guidelines	EPPO PP 1/152, PP 1/135, PP 1/181, PP 1/225
	Specific guidelines	EPPO PP 1/178, PP 1/219, PP 1/13, PP 1/236, PP 1/107, PP 1/220, PP 1-274
Experimental design	Plot design	RCBD (85),
	Plot size	16-1400 m²
	Number of replications	4 (85)
Crop	Trials per crop	BRSNS: (1) BRSNW: (62) TRZAW: (6) ZEAMX: (16)
	Varieties per crop	BRSNS: Builder (1) BRSNW: Alicante (1), Archipel (2), Architect F1 (1), Arsenal (4), Atora (1), Bonanza (1), Broadway (1), Builder (1), Campus (1), Chobry (1), DK Excellum (1), DK Exception(1), DK Expression (1), DK Extorm (1), ES Bourbon (1), Exquisite (1), Factor (3), Fencer (2), Galacti (3), Hybirock (8), Imido (2), Imperial (1), Jumper (2), Maximum (1), LG Arsenal (1), Memori CS (3), Monolit (1), Oriolus F1 (1), Pioneer PX113 (1), President (1), PT248 (1), PT264 F1 (1), PT 271 (1), Raffiness (2), Rohan (3), RTG Bonanza F1 (1), Rumba (2), Sherlock (1), Taifun (1). TRZAW: Ariesan (1), Discus (1), Glosa (2), Renan (1), Sorial (1) ZEAMX:DKC 3037 (1), DKC 4014 (1), DKC 4943 (1), GK Sarolta (1), LG 233 (2), Mas 26K (1), P9025 (2), P9074 (1), PR39A98 (1), Prosna PAO 220 (1), SY Multiplas (1), Turda 332 (2), 9903 (1).
	Sowing period	BRSNS: May (1) BRSNW: May (1), August (52), September (9), October (1). TRZAW: September (2), October (4) ZEAMX: April (12), May (4)
Application	Crop stage (BBCH)* at application	BRSNS: BBCH 61 (1) BRSNW: BBCH 17-23 (1), BBCH 30-39 (11), BBCH 50-59 (27), BBCH 60-71 (24) TRZAW: BBCH 59-65 (6) ZEAMX: BBCH 51-59 (10), BBCH 61-73 (6)
	Timing Pest stage at application (1)	Pests present or predicted by official organisations
	Number of applications	1 (85 trials)
	Spray volumes	200 - 500 L/ha
Assessment	Assessment types	% damaged pods, % dead plants, % damaged above husk, % damaged below husk, % with broken husk, % with larvae, 5 plants damaged, adults per plant, adults per leaf, holes per plant, holes per pod
	Assessment dates	1-7 DAT, 8-14 DAT, 15-21 DAT, 23-28 DAT, 29-45 DAT, 47-94 DAT
Other relevant information	*e.g.* Natural / artificial innoculation…	All natural infestations
	e.g. Field / Greenhouse...	All trials were conducted in the field
	...	All trials were conducted according to GEP

* BBCH for weeds, pre-emergence, preventive / curative application, insect stage…

CEUTNA in BRSNW

A total of 22 trials, in which CEUTNA was were conducted in winter oilseed rape, in Czechia, Germany, Hungary, Romania and Poland, in three EPPO climatic zones. LEPTOSAR 200 SL was tested at 0.1 to 0.3L/ha (20 – 60 g of active substance) in BRSNW for the control of CEUTNA.

Assessments were conducted on the whole plant.

Reference products were Mospilan at 0.15-0.25 kg/ha, Apis 200 SE at 0.25L/ha and Karate Zeon at 0.075L/ha.

Control values for the assessments of larvae per plant were generated using the Abbott method.

The key assessment of this pest is the number of larvae per plant, as this avoids confusion due to adults moving into the crop.

A summary of the dose response results is provided in Table 3.2-18.

For the key assessment, the recommended use rate of LEPTOSAR 200 SL provided a superior level of control compared to the reference product in 11 trials out of 22 trials.

Table 3.2-18: Efficacy of LEPTOSAR 200 SL compared to reference products against CEUTNA in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommended rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
CEUTNA in BRSNW; larvae per plant	MA	5	**0.5**	0.1	1.2	**77.4**	50.5	100	**80.3**	50.2	100	**85.7**	65.2	100	**81.6**	67.6	100	2	-	3
	NE	7	**3.7**	~~2.1~~ 2,4	8.6	**76.5**	66.4	86.4	**85.6**	81.1	91.0	**89.4**	82.4	97.3	**84.7**	80.2	90.1	5	-	2
	SE	10	**4.8**	1.5	12.1	**79.4**	57.4	88.0	**81.4**	60.9	89.5	**84.7**	70.5	91.5	**81.1**	71.3	86.5	4	-	6
	ALL	22	**3.5**	0.1	12.1	**78.0**	50.5	100	**82.5**	50.2	100	**86.4**	65.2	100	**82.4**	67.6	100	11	-	11

CEUTAS in BRSNW

A total of 17 trials in which CEUTAS was were conducted in winter oilseed rape, in Czechia, Germany, Hungary, Romania, Poland and the United Kingdom, in three EPPO climatic zones.

Reference products were Mospilan at 0.15-0.20 kg/ha, Apis 200 SE at 0.25L/ha and Hallmark Zeon or Karate Zeon at 0.075L/ha.

Assessments were conducted on leaves, pods, stems or on the whole plant.

For assessments of adults the data were transformed using the Henderson-Tilton method. Control values for the assessments of holes in pods were generated using the Abbott method. The key assessment for this pest is the number of larvae per pod at 21-28 DAT, which gives a clear indication of the damage done to the crop by this pest. However, not in each conducted trial this assessment were available or valid, due to eg. too low pest pressure at this assessment.

A summary of the dose response results is provided in Table 3.2-19.

For the key assessment, the recommended use rate of LEPTOSAR 200 SL provided a superior level of control compared to the reference product in 10 trials out of 16 trials with larvae assessment..

Table 3.2-19: Efficacy of LEPTOSAR 200 SL compared to reference products against CEUTAS in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommended rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
CEUTAS in BRSNW; larvae per pod 21-28 DAT	MA	4	**1.7**	0.1	6.3	**54.9**	33.3	73.8	**63.0**	44.4	57.5	**56.2**	28.3	79.7	**71.2**	55.3	88.2	**63.5**	39.2	82.3	2	-	2
	NE	6	**0.4**	0.3	0.6	**80.5**	70.9	86.0	**87.0**	76.5	93.6	**91.4**	80.1	100	**92.1**	81.0	100	**81.9**	75.2	88.5	6	-	-
	SE	6	**1.2**	0.1	3.0	**58.6**	30.6	80.4	**74.6**	59.0	84.0	**80.0**	74.2	89.0	**83.8**	77.5	90.9	**81.1**	74.4	86.9	2	-	4
	ALL	16	**1.0**	0.1	6.3	**65.9**	30.6	86.0	**76.3**	44.4	93.6	**78.3**	28.3	100	**83.8**	55.3	100	**77.0**	39.2	88.5	10	-	6

CEUTQU in BRSNW

A total of 19 trials in which CEUTQU was were conducted in winter oilseed rape, in Czechia, Germany, Hungary, Romania, Poland and the United Kingdom, in three EPPO climatic zones.

Reference products were Mospilan at 0.0.12-0.25 kg/ha, Apis 200 SE at 0.25L/ha and Karate Zeon at 0.075L/ha.

Assessments were conducted on the whole plant.

Control values for the assessments of larvae per plant were generated using the Abbott method.

The key assessment of this pest is the number of larvae per plant, as this avoids confusion due to adults moving into the crop.

For the key assessment, the recommended use rate of LEPTOSAR 200 SL provided a superior level of control compared to the reference product in 11 trials out of 19 trials, having an inferior performance in one trial.

A summary of the dose response results is provided in Table 3.2-20.

Table 3.2-20: Efficacy of LEPTOSAR 200 SL compared to reference products against CEUTQU in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommended rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
CEUTQU in BRSNW; larvae per plant	MA	4	**0.8**	0.3	1.1	**59.3**	35.4	75.0	**67.3**	557.2	79.5	**72.1**	57.8	84.0	**65.4**	44.8	74.9	2	-	2
	NE	7	**2.6**	0.2	6.2	**80.9**	69.9	88.3	**88.4**	78.1	93.7	**93.1**	86.3	98.0	**89.7**	84.3	95.3	4	-	3
	SE	8	**6.3**	2.8	10.9	**79.3**	71.3	88.2	**83.4**	76.4	89.4	**84.7**	79.6	90.1	**82.0**	74.5	86.9	5	1	2
	ALL	19	**3.8**	0.2	10.9	**75.7**	35.4	88.3	**81.9**	57.2	93.7	**85.1**	57.8	98.0	**81.4**	44.8	95.3	11	1	7

CEUTSP in BRSNW

A total of 17 trials in which CEUTSP not identified at the time of assessment was present were conducted in winter oilseed rape, in Czechia, Germany, Hungary, Romania and Poland, in three EPPO climatic zones. These assessments are supportive of the data for CUETAS and CUETQU summarised above.

Reference products were Mospilan at 0.15-0.25 kg/ha, Apis 200 SE at 0.25L/ha and Karate Zeon at 0.075L/ha.

Assessments were conducted on pods or on the whole plant, counting the number of holes in the relevant plant part, without identifying the species that caused the holes.

Control values for the assessments of holes in pods and plants were generated using the Abbott method.

The key assessment in this case is that of the number of holes per plant.

For the key assessment, the recommended use rate of LEPTOSAR 200 SL provided a superior level of control compared to the reference product in 6 trials out of 17 trials, having an inferior performance in one trial.

A summary of the dose response results is provided in Table 3.2-21.

Table 3.2-21: Efficacy of LEPTOSAR 200 SL compared to reference products against CEUTSP in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommended rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
CEUTSP; holes per plant	MA	2	**2.0**	1.9	2.1	**39.6**	22.9	56.3	**47.5**	42.4	52.6	**44.7**	28.8	60.5	**51.8**	26.2	77.4	-	1	1
	NE	5	**1.6**	1.4	2.2	**72.6**	65.5	77.9	**82.5**	77.0	86.5	**90.7**	78.1	97.5	**86.2**	77.6	93.7	2	-	6
	SE	10	**3.7**	0.3	6.2	**62.6**	12.5	86.9	**66.3**	21.2	86.3	**70.4**	283	88.8	**67.7**	27.6	86.9	4	-	6
	ALL	17	**2.8**	0.3	6.2	**66.2**	12.5	86.9	**72.5**	21.2	86.5	**77.2**	28.3	97.5	**75.0**	26.2	93.7	6	1	10

DASYBR in BRSNW

A total of 18 trials in which DASYBR was were conducted in winter oilseed rape, in Czechia, Hungary, Romania, Poland and the United Kingdom, in three EPPO climatic zones.

Reference products were Mospilan at 0.12-0.30 kg/ha, Apis 200 SE at 0.2-0.25L/ha and Hallmark Zeon at 0.075L/ha.

Assessments were conducted on pods, either of the damage per pod (% damage incidence) or the number of larvae per pod.

For the majority of assessments the data were transformed using the Henderson-Tilton method. Where no plot-by-plot assessment was conducted at the first application, data were transformed by the Abbott method. In trial A-200SL-OR3-CPd_CZ19_3 almost every pod was damaged at application, so subsequent assessments of % damaged pods were worthless.

The key assessment of this pest/crop combination is that of the number of larvae per pod at 21-22 DAT, which gives a clear indication of the damage done to the crop by this pest. However, not in each conducted trial this assessment were available or valid, due to eg. too low pest pressure at this assessment.

For the key assessment, the recommended use rate of LEPTOSAR 200 SL provided a superior level of control compared to the reference product in two trials out of 14 trials with larvae assessment.

A summary of the dose response results is provided in Table 3.2-22.

Table 3.2-22: Efficacy of LEPTOSAR 200 SL compared to reference products against DASYBR in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommended rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
DASYBR; larvae per pod 21-22 DAT	MA	5	**3.2**	1.3	8.7	**53.8**	35.2	73.1	**57.8**	29.6	75.6	**65.0**	39.3	80.8	**71.8**	40.7	88.6	**66.5**	48.7	80.8	1	-	4
	NE	4	**5.6**	3.7	6.6	**77.9**	74.1	83.7	**80.9**	75.0	95.4	**82.6**	77.0	96.1	**82.6**	75.2	97.4	**79.7**	77.5	82.4	1	-	3
	SE	5	**2.7**	1.0	6.0	**62.5**	15.4	90.0	**80.2**	64.6	93.3	**86.0**	65.9	97.3	**87.8**	65.9	98.3	**84.1**	68.9	92.8	-	-	5
	ALL	14	**3.7**	1.0	8.7	**63.8**	15.4	90.0	**72.4**	29.6	95.4	**77.5**	39.3	97.3	**80.6**	40.7	98.3	**76.6**	48.7	92.8	2	-	12

MELIAE in BRSNW

A total of 20 trials in which MELIAE was were conducted in winter oilseed rape, in Czechia, Germany, Hungary, Romania, Poland and the United Kingdom, in three EPPO climatic zones. In the majority of trials the pest was absent at application.

Reference products were Mospilan at 0.12-0.30 kg/ha, Apis 200 SE at 0.25L/ha and InSyst at 0.2kg/ha.

Assessments were conducted on shoots or on the whole plant.

For assessments of adults the data were transformed using the Henderson-Tilton method.

The key assessment of this pest is the number of adults per plant at 1-2 DAT, which eliminates any influence from the movement of adults into the crop after application.

For the key assessment, the recommended use rate of LEPTOSAR 200 SL provided a superior level of control compared to the reference product in 11 trials out of 20 trials.

A summary of the dose response results is provided in Table 3.2-23.

Table 3.2-23: Efficacy of LEPTOSAR 200 SL compared to reference products against MELIAE in BRSNW

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommended rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
MELIAE; adults per plant 1-2 DAT	MA	7*	**4.8**	2.1	9.0	**68.4**	49.2	92.0	**75.1**	52.8	90.2	**75.2**	51.4	91.2	**82.5**	53.9	95.6	**74.8**	52.3	89.2	3	-	4
	NE	5	**4.6**	2.3	9.6	**71.3**	51.8	84.1	**79.5**	61.9	90.1	**84.6**	69.4	93.2	**87.9**	72.0	96.0	**79.9**	69.2	85.9	4	-	1
	SE	8	**4.9**	3.4	5.8	**65.2**	35.6	83.9	**79.9**	45.5	89.3	**82.5**	48.5	91.8	**87.6**	74.1	93.87	**84.6**	79.9	93.4	4	-	4
	ALL	20	**4.8**	2.1	9.6	**67.8**	35.4	92.0	**78.1**	45.5	93.2	**80.5**	48.5	93.2	**86.4**	53.9	95.7	**80.0**	52.3	93.4	11	-	9

*Five trials only at 0.3L/ha in Maritime zone

PYRUNU in ZEAMX

A total of 11 trials in which PYRUNU was present were conducted in maize in Czechia, Germany, Hungary, Romania and Poland, in three EPPO climatic zones.

Reference products were Fastac Active 0.6L/ha, Inazuma 0.2kg/ha, Karate Zeon at 0.2 and 0.25L/ha.

Assessments were conducted on corn husks or on the whole plant.

For assessments of control the data were transformed using the Abbott method.

The key assessment of this pest/crop combination is the second assessment of the total number of plants damaged, as this gives the clearest indication of the reduction in pest damage.

For the key assessment, the recommended use rate of LEPTOSAR 200 SL provided a superior level of control compared to the reference product in one trial out of 11 trials, having an inferior performance in seven trials.

A summary of the dose response results is provided in Table 3.2-24.

Table 3.2-24: Efficacy of LEPTOSAR 200 SL compared to reference products against PYRUNU in ZEAMX

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.3 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommended rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
PYRUNU; % total plants damaged 48-94 DAT	MA	2	**52.5**	52.5	52.5	**74.4**	73.3	75.5	**66.0**	65.8	66.3	-	-	2
	NE	5	**67.8**	60.0	73.8	**71.1**	69.9	72.3	**73.6**	54.0	87.8	2	3	-
	SE	4	**57.3**	18.8	87.5	**61.5**	49.8	74.2	**71.3**	67.0	74.8	-	2	2
	ALL	11	**61.2**	18.8	87.5	**68.2**	49.8	75.5	**71.4**	54.0	87.8	2	5	4

DIABVI in ZEAMX

A total of 5 trials in which DIABVI was present were conducted in maize, in Hungary and Romania, in the South-eastern EPPO climatic zone.

The reference products were Karate Zeon at 0.25L/ha or Mospilan at 0.15-0.2kg/ha.

Assessments were of the number of larvae per plot, or the number of adults found on 30 plants or in one or three traps. The pest populations are therefore not comparable from trial to trial. For the majority of assessments the data were transformed using the Henderson-Tilton method; for one trial this was not appropriate as the pest was not present at the time of application, and the results for this trial were calculated using the Abbott method.

Assessment data presented below summarise the highest level of control achieved during the course of the trial.

For the key assessment, the recommended use rate of LEPTOSAR 200 SL performed to an equivalent level to the reference product in all trials.

A summary of the dose response results is provided in Table 3.2-25.

Table 3.2-25: Efficacy of LEPTOSAR 200 SL compared to reference products against DIABVI in ZEAMX

TARGET	EPPO	TRIALS	Untreated Check			LEPTOSAR 200 SL 0.15 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommended rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
DIABVI; highest level of control achieved	SE (ALL)	5	**13.7**	4.1	40.9	82.7	**52.2**	100.0	**78.8**	44.2	100	-	-	5

LEMAME in TRZAW

A total of six trials in which infestations of cereal leaf beetle in winter wheat were present, were conducted in Romania in 2019. In every trial the pest was present at application. The reference product in every trial was Karate Zeon at 0.15L/ha.

All trials were conducted in a single EPPO zone. Assessments were analysed using the THT method. Key assessments were 3 DAA and 8-9 DAA.

The key assessment of this pest/crop combination is that of the number of adults per plant at 3DAT, which indicates the control of those adults present at application but avoids the influence of any adults arriving in the crop after spraying.

For the key assessment, the recommended use rate of LEPTOSAR 200 SL provided a superior level of control compared to the reference product in two trials out of six trials.

A summary of the dose response results is provided in Table 3.2-26.

Table 3.2-26: Efficacy of LEPTOSAR 200 SL compared to reference products against LEMAME in TRZAW

TARGET	EPPO	TRI-ALS	Untreated Check			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommended rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
LEMAME ; adults per plant 3 DAT	SE (ALL)	6	**1.3**	0.4	1.9	**91.9**	90.0	93.3	**96.2**	95.0	97.0	**94.1**	92.9	95.7	2	-	4

Study Comments: 3.2.3 dRR point 3.2.3	

EN: Evaluator conclusion:

Control of insect pests in the North-East EPPO climatic zone (PL)

The applicant submitted 21 trials carried out in 2017, 2018 and 2019, in different region in Poland (Wielkopolskie, Lubelskie, Opolskie, Dolnośląskie, Kujawsko – Pomorskie, Warmińsko - Mazurskie) on winter oil seed rape (BBCH 32-67) against:

1. *Ceutorhynchus napi* (CEUTNA) – 7 trials;
2. *Ceutorhynchus obstrictus* (CEUTAS) – *6 trials*
3. *Ceutorhynchus pallidactylus* (CEUTQU) – 7 trials;
4. *Dasineura brassicae* (DASYBR) - 6 trials;
5. *Meligethes aeneus* (MELIAE) - 5 trials;

and on maize (BBCH 53-61) against:

6. *Ostrinia nubilalis* (PYRUNU)- 5 trials

Efficacy trials were carried out by organizations that are officially recognized as competent to carry out efficacy testing in accordance with Regulation (EC) 284/2013 by the authorities in the relevant countries. All trials have been conducted according to GEP.

The efficacy trials were designed, conducted and reported according to the following EPPO guidelines:
1. PP 1/181 Conduct and reporting of efficacy evaluation trials including good experimental practice.
3. PP 1/135 Phytotoxicity assessment
4. PP 1/152 Design and analysis of efficacy evaluation trials
5. PP 1/225 Minimum effective dose
6. PP 1/178 *Meligethes aenus* on oilseed rape
7. PP 1/219 *Ceutorhynchus napi* and *C. pallidactylus* (*quadridens*) in OSR
8. PP 1/13 *Ostrinia nubialis*
10. PP 1/107 *Ceutorhynchus assimilis*
11. PP 1/220 *Dasineura brassicae*

Results of experiments (data on effectiveness) are contained in Appendix 5 to the BAD.
Trials were conducted in Poland (the NE EPPO climatic zone). Trials were of randomized block design with a minimum of four replicates. Details on trial sites, applications are contained in Appendix 4 to the BAD.
The tested insecticide was applied at the rates: 0,1 l/ha; 0,15 l/ha; 0,2 l/ha; 0,25 l/ha; 0,3 l/ha of LEPTOSAR 200 SL (spray volume 200 – 400 l/ha for winter oil seed rape and 300 l/ha for maize) on winter oil seed rape and maize as a single post-emergence application against insect pests.

1. Efficacy [%] against CEUTNA (larvae) in winter oil seed rape 14 – 53 days after application:

0,2 l/ha	0,25 l/ha	0,3 l/ha	Ref.
76,5 (66,4 – 86,4)	85,6 (81,1 – 91,0)	89,4 (82,4 – 97,3)	84,7 (80,2 – 90,1)

2. Efficacy [%] against CEUTAS in winter oil seed rape:

Type of ASS	0,15 l/ha	0,2 l/ha	0,25 l/ha	0,3 l/ha	Ref.
Control of adults at 1-2 DAA	80,5 (73,7 – 86,2)	83,95 (76,2 – 91,1)	89,3 (80,05 – 100)	90,5 (81,7 – 100)	80,8 (71,9 – 87,3)
Control of adults at 5-7 DAA	81,4 (69,7 – 90,0)	86,0 (73,3 – 96,7)	89,3 (77,2 – 100)	90,4 (79,5 – 100)	81,0 (76,2 – 88,3)
Reduction of holes per pod 21-28 DAA	73,3 (65,0 – 79,0)	78,7 (69,6 – 82,7)	82,3 (70,7 – 89,85)	82,85 (79,5 – 84,5)	73,9 (66,75 – 81,5)
Control of larvae per pod 21-28 DAA	80,5 (70,9 – 86)	87 (76,5 – 93,6)	91,4 (80,1 – 100)	92,1 (81,0 – 100)	81,9 (75,2 – 88,5)

3. Efficacy [%] against CEUTQU (larvae) in winter oil seed rape 14 – 53 days after application:

0,2 l/ha	0,25 l/ha	0,3 l/ha	Ref.
80,9 (69,9 – 88,3)	88,4 (78,1 – 93,7)	93,1 (86,3– 98,0)	89,7 (84,3 – 95,3)

4. Efficacy [%] against DASYBR in winter oil seed rape:

Type of ASS	0,15 l/ha	0,2 l/ha	0,25 l/ha	0,3 l/ha	Ref.
Reduction in the percentage of damaged pods 2-6 DAA	51,15 (0,0-83,7)	56,4 (8,1 – 85,2)	58,9 (7,8 – 89,5)	59,4 (5,5 – 87,1)	55,3 (7,3 – 84,0)
Reduction in the percentage of damaged pods 14 -16 DAA	79,7 (63,1 – 90,3)	83,6 (66,6 – 97,1)	87,0 (73,9 – 98,6)	88,4 (78,2 – 100)	81,1 (67,3 – 91,5)
Control of larvae per pod 21-28 DAA	77,9 (74,1 – 83,6)	80,9 (75,0 – 95,4)	82,6 (77,0 – 96,1)	82,6 (75,1 – 97,4)	79,7 (77,5 – 82,4)

5. Efficacy [%] against MELIAE in winter oil seed rape

Type of ASS	0,2 l/ha	0,25 l/ha	0,3 l/ha	Ref.
Control of adults 1-2 DAA	79,5 (61,9 – 90,1)	84,6 (69,4 – 93,2)	87,9 (72,0 – 95,7)	79,7 (69,2 – 85,9)
Control of adults 4-6 DAA	84,7 (76,6 – 91,3)	90,2 (81,7 – 98,0)	92,0 (82,9 – 99,1)	87,6 (81,5 – 90,9)
Control of adults 8-10 DAA	83,2 (79,9 – 94,8)	86,8 (81,0 – 96,9)	89,0 (82,1 – 98,6)	86,4 (81,4 – 96,6)

A dose rate 0,15 l/ha controlled MELIAE on the level 71,3%, 77,8% and 75,2 % at 1-2 DAA, 4-6 DAA, 8-10 DAA respectively. The product controlled the insect less in comparison to the reference product. The dose rate 0,15 l/ha might be considered as excellent effective especially with lower pest pressure / projected lower pest pressure.

6. Efficacy [%] against PYRUNU in maize at dose rate 0,3 l/ha:

Type of ASS	0,3 l/ha	Ref.
Percentage of plants with larvae, 13-43 DAA	59,9 (29,3-76,6)	65,8 (15,8-93,6)
Holes per plant, 13-43 DAA	76,6 (69,6-82,2)	82,0 (62,9-96,8)
Larvae per plant, above the husk, 13-43 DAA	76,8 (72,6-86,2)	82,6 (64,6-96,6)

Larvae per plant, below the husk, 13-43 DAA	77,7 (52,9-100)	85,2 (63-100)
Larvae per plant, in the husk, 13-43 DAA	76,9 (62,4-87,9)	79,5 (50,4-97)
Percentage of dead plants, 48-50 DAA (2 trials)	91,7 (83,3-100)	81,2 (79,2-83,3)
Percentage of plants damaged above the husk, 48-94 DAA	66,7 (52,0-77,4)	75,5 (53,6-88,0)
Percentage of plants damaged below the husk, 48-94 DAA	80,5 (68,7-94,1)	75,6 (46,2-100)
Percentage of plants with a broken husk, 48-94 DAA	71,6 (45,5-83,3)	74,0 (55,0-85,0)
Percentage total plants damaged, 48-94 DAA	71,1 (70-72,3)	73,6 (54,0-87,8)

Additionally the Applicant presented 5 trials carried out against *Ceutorhynchus sp.* which might be treated as supportive for results against CEUTAS and CEUTQU. In those trials the product efficacy amounted 72,6%, 82,5%, 90,7% for dose rates 0,2 l/ha, 0,25 l/ha, 03 l/ha respectively (presented as a number of holes 18-31 DAA per plant). The efficacy of reference product was on the level of 86,2%.

The Applicant presented less than minimal number 6 of trials for MELIAE (5 trials) and PYRUNU (5 trials). The Evaluator accepted those number of trials as sufficient to confirm the efficacy of product. Trials were conducted in two season and the results presented in those trials are coherent.

To sum up, it might be concluded that the post-emergence application of LEPTOSAR 200 SL provides benefit against:

7. CEUTNA at 0,2 – 0,3 l/ha dose rates
8. CEUTAS at 0,15 – 0,3 l/ha dose rates
9. CEUTQU at 0,2 – 0,3 l/ha dose rates
10. DASYBR at 0,15 – 0,3 l/ha dose rates
11. MELIAE at 0,15 – 0,3 l/ha dose rates
    on winter oil seed rape comparable or better with standard products: Apis 200 SE and Mospilan
12. PYRUNU at 0,3 l/ha dose rate comparable or better with standard products Karate Zeon 50 CS.

Control of insect pests in the Maritime EPPO climatic zone (DE, CZ)

The applicant submitted 23 trials carried out in 2017, 2018 and 2019 on winter and spring (1 trial - A-200SL-OR3-CPd_UK_3A_R) oil seed rape (BBCH 30-71) against:

1. *Ceutorhynchus napi* (CEUTNA) – 5 trials;
2. *Ceutorhynchus obstrictus* (CEUTAS) – 4 trials;
3. *Ceutorhynchus pallidactylus* (CEUTQU) – 4 trials;
4. *Dasineura brassicae* (DASYBR) - 5 trials;
5. *Meligethes aeneus* (MELIAE) - 7 trials;

and on maize (BBCH 53-55) against:

6. *Ostrinia nubilalis* (PYRUNU) - 2 trials

Efficacy trials were carried out by organizations that are officially recognized as competent to carry out efficacy testing in accordance with Regulation (EC) 284/2013 by the authorities in the relevant countries. All trials have been conducted according to GEP.
The efficacy trials were designed, conducted and reported according to the following EPPO guidelines:
1. PP 1/181 Conduct and reporting of efficacy evaluation trials including good experimental practice.
3. PP 1/135 Phytotoxicity assessment
4. PP 1/152 Design and analysis of efficacy evaluation trials
5. PP 1/225 Minimum effective dose
6. PP 1/178 *Meligethes aenus* on oilseed rape
7. PP 1/219 *Ceutorhynchus napi* and *C. pallidactylus* (*quadridens*) in OSR
8. PP 1/13 *Ostrinia nubialis*
10. PP 1/107 *Ceutorhynchus assimilis*
11. PP 1/220 *Dasineura brassicae*

Results of experiments (data on effectiveness) are contained in Appendix 5 to the BAD.
Trials were conducted in in CZ, DE and UK (the Maritime EPPO climatic zone). Trials were of random-

ized block design with a minimum of four replicates. Details on trial sites, applications are contained in Appendix 4 to the BAD.
The tested insecticide was applied at the rates: 0,1 l/ha; 0,15 l/ha; 0,2 l/ha; 0,25 l/ha; 0,3 l/ha of LEPTOSAR 200 SL (spray volume 200 – 400 l/ha for winter oil seed rape and 300 l/ha for maize) on winter oil seed rape and maize as a single post-emergence application against insect pests.

1. Efficacy [%] against CEUTNA (larvae) in winter oil seed rape 14 – 53 days after application:

0,25 l/ha	**0,3 l/ha**	**Ref.**
80,3 (50,2 – 100)	85,7 (65,2 – 100)	81,6 (67,6 – 100)

2. Efficacy [%] against CEUTAS in winter oil seed rape:

Type of ASS	**0,2 l/ha**	**0,25 l/ha**	**0,3 l/ha**	**Ref.**
Control of adults at 1-2 DAA (3 trials)	66,3 (50,1 – 75,3)	68,2 (42,7 – 83,0)	74,3 (57,3 – 83,2)	62,5 (33,6 – 79,5)
Control of adults at 5-7 DAA (4 trials)	69,6 (62,9 – 72,8)	72,0 (52,5 – 81,0)	73,8 (62,8 – 84,3)	60,2 (42,5 – 78,8)
Reduction of holes per pod 21-28 DAA (2 trials)	57,8 (38,0 – 77,5)	53,8 (18,8 – 88,7)	72,6 (50,2 – 95,0)	73,0 (57,2 – 88,7)
Control of larvae per pod 21-28 DAA (4 trials)	63,0 (44,4 – 77,3)	56,2 (28,2 – 79,7)	71,1 (55,3 – 88,2)	63,5 (39,2 – 82,3)

3. Efficacy [%] against CEUTQU (larvae) in winter oil seed rape 14 – 53 days after application:

0,25 l/ha	**0,3 l/ha**	**Ref.**
67,3 (57,3 – 79,4)	72,1 (57,8– 84,0)	65,4 (44,8 – 74,9)

4. Efficacy [%] against DASYBR in winter oil seed rape:

Type of ASS	**0,2 l/ha**	**0,25 l/ha**	**0,3 l/ha**	**Ref.**
Reduction in the percentage of damaged pods 2-6 DAA (3 trials)	57,4 (33,5 – 73,2)	52,5 (31,5 – 71,7)	71,2 (43,1 – 86,1)	58,9 (19,1 – 79,4)
Reduction in the percentage of damaged pods 14 -16 DAA (4 trials)	65,7 (48,3 – 80,0)	65,4 (50,6 – 75,4)	75,8 (65,8 – 80,0)	57,2 (35,1 – 76,6)
Control of larvae per pod 21-28 DAA (5 trials)	57,8 (29,6 – 75,5)	65,0 (39,3 – 80,4)	71,8 (40,7 – 88,6)	66,5 (48,6 – 80,8)

5. Efficacy [%] against MELIAE in winter oil seed rape

Type of ASS	**0,2 l/ha**	**0,25 l/ha**	**0,3 l/ha**	**Ref.**
Control of adults 1-2 DAA (7 trials)	75,1 (52,8 – 90,2)	75,2 (51,4 – 91,2)	82,5 (53,8 – 95,6)	74,8 (52,3 – 89,2)

Control of adults 4-6 DAA (4 trials)	74,1 (52,8 – 100)	75,2 (45,6 – 100)	71,6 (40,1 – 100)	66,8 (30,1 – 100)
Control of adults 8-10 DAA (3 trials)	77,6 (53,2 – 100	82,8 (62,8 – 100)	85,2 (70,5 – 100)	82,2 (67,9 – 100)

6. Efficacy [%] against PYRUNU in maize at dose rate 0,3 l/ha:

Type of ASS	**0,3 l/ha**	**Ref.**
Percentage of plants with larvae, 13-43 DAA	85,1 (84,7-85,4)	81,0 (80,0-81,9)
Holes per plant, 13-43 DAA	80,2 (69,0-91,5)	78,4 (69,0-88,0)
Larvae per plant, above the husk, 13-43 DAA	80,9 (69,2-92,7)	76,4 (69,2-83,5)
Larvae per plant, below the husk, 13-43 DAA	78,7 (68,7-88,7)	66,5 (57,5-75,4)
Larvae per plant, in the husk, 13-43 DAA	75,6 (63,7-87,5)	73,1 (58,7-87,5)
Percentage of plants damaged above the husk, 48-94 DAA	73,1 (67,5-78,7)	66,0 (63,3-68,7)
Percentage of plants damaged below the husk, 48-94 DAA	76,0 (75,0-77,0)	69,8 (56,2-83,3)
Percentage of plants with a broken husk, 48-94 DAA	64,6 (62,5-66,7)	54,2 (29,2-79,2)
Percentage total plants damaged, 48-94 DAA	74,4 (73,3-75,4)	66,0 (65,8-66,3)

Additionally the Applicant presented trials carried out against *Ceutorhynchus sp.* which might be treated as supportive for results against CEUTAS and CEUTQU. In those trials the product efficacy amounted:
- 39,6%, 47,5%, 44,6% for dose rates 0,2 l/ha, 0,25 l/ha, 03 l/ha respectively (presented as a number of holes 48-67 DAA per plant) – 2 trials
- 87,5% for dose rates 0,2 l/ha, 0,25 l/ha, 03 l/ha respectively (presented as a number of holes 48-67 DAA per pod) – 1 trial

The efficacy of reference product was on the level of 51,8% and 91,7% respectively.
The Applicant presented less than minimal number of 6 of trials for CEUTNA, CEUTAS, CEUTQU, DASYBR, PYRUNU. The data might not be sufficient to prove the effectiveness of the product. It is for decision of cMS whether above mentioned trials and results should be taken under consideration to prove efficacy of LEPTOSAR 200SL.
What is more, the number of trials for MELIAE is 7 but in trial A-200SL-OR3-CPd_UK_3A_R the control of adults at 8-10 days after treatment was not taken under consideration, because the pest population in untreated plot decreased in this time. For trials: Ciech18-GE05Ciech18-GE06, S19-02310-01 the control of adults at 8-10 days after treatment and at 8-10 days after treatment were not taken under consideration, because of the same reason (point 5 above). It is also for decision of cMS whether above mentioned trials and results should be taken under consideration to prove efficacy of LEPTOSAR 200SL.

Control of insect pests in the SE EPPO climatic zone(RO, HU, SK)

The applicant submitted 41 trials carried out in 2017, 2018 and 2019 on winter oil seed rape (BBCH 23-71) against:

1. *Ceutorhynchus napi* (CEUTNA) – 10 trials;
2. *Ceutorhynchus obstrictus* (CEUTAS) – 8 trials
3. *Ceutorhynchus pallidactylus* (CEUTQU) – 8 trials;
4. *Dasineura brassicae* (DASYBR) - 5 trials;
5. *Meligethes aeneus* (MELIAE) - 8 trials;

on maize (BBCH 51-73) against:

6. *Ostrinia nubilalis* (PYRUNU) - 4 trials (one season 2018)
7. *Diabrotica virgifera virgifera* (DIABVI) - 5 trials

on winter wheat (BBCH 59-65) against:

8. *Oulema melanopus* (LEMAME) - 6 trials (one season 2019)

Efficacy trials were carried out by organizations that are officially recognized as competent to carry out efficacy testing in accordance with Regulation (EC) 284/2013 by the authorities in the relevant countries. All trials have been conducted according to GEP.
The efficacy trials were designed, conducted and reported according to the following EPPO guidelines:
1. PP 1/181 Conduct and reporting of efficacy evaluation trials including good experimental practice.
3. PP 1/135 Phytotoxicity assessment
4. PP 1/152(4) Design and analysis of efficacy evaluation trials
5. PP 1/225 Minimum effective dose
6. PP 1/178 *Meligethes aenus* on oilseed rape
7. PP 1/219 *Ceutorhynchus napi* and *C. pallidactylus* (*quadridens*) in OSR
8. PP 1/13 *Ostrinia nubialis*
9. PP 1/236 *Oulema* spp. on cereals
10. PP 1/107 *Ceutorhynchus assimilis*
11. PP 1/220 *Dasineura brassicae*
12. PP 1/274 *Diabrotica virgifera* – adults

Results of experiments (data on effectiveness) are contained in Appendix 5 to the BAD.
Trials were conducted in in HU and RO (the SE EPPO climatic zone). Trials were of randomized block design with a minimum of four replicates. Details on trial sites, applications are contained in Appendix 4 to the BAD.
The tested insecticide was applied at the rates: 0,1 l/ha; 0,15 l/ha; 0,2 l/ha; 0,25 l/ha; 0,3 l/ha of LEPTO-SAR 200 SL (spray volume 200 – 500 l/ha for winter oil seed rape, 200 - 500 l/ha for maize and 200 -400 l/ha for winter wheat) on winter oil seed rape and maize as a single post-emergence application against insect pests.

1. Efficacy [%] against CEUTNA (larvae) in winter oil seed rape 14 – 53 days after application:

0,2 l/ha	**0,25 l/ha**	**0,3 l/ha**	**Ref.**
79,4 (57,3 – 88,0)	81,3 (60,6 – 89,5)	87,7 (70,5 – 91,5)	81,0 (71,3 – 86,5)

2. Efficacy [%] against CEUTAS in winter oil seed rape:

Type of ASS	**0,2 l/ha**	**0,25 l/ha**	**0,3 l/ha**	**Ref.**
Control of adults at 1-2 DAA (8 trials)	75,2 (30,4 – 93,7)	79,6 (39,4 – 93,7)	79,5 (44,5 – 95,1)	78,1 (37,0 – 94,8)
Control of adults at 5-7 DAA (6 trials)	75,7 (63,9 – 87,2)	80,8 (59,7 – 89,3)	83,8 (60,0 – 91,9)	80,7 (57,2 – 87,5)
Reduction of holes per pod 21-28 DAA (6 trials)	66,6 (32,5 – 86,3)	72,6 (44,9 – 90,0)	76,1 (44,9 – 92,8)	75,9 (60,8 – 88,7)
Control of larvae per pod 21-28 DAA (6 trials)	74,6 (59,0 – 93,4)	80,0 (74,2 – 89,0)	83,8 (77,5 – 90,2)	81,1 (74,4 – 87,0)

3. Efficacy [%] against CEUTQU (larvae) in winter oil seed rape 14 – 53 days after application:

0,2 l/ha	**0,25 l/ha**	**0,3 l/ha**	**Ref.**
79,3 (71,2 – 88,2)	83,4 (76,4 – 89,4)	84,7 (79,6– 90,1)	82,0 (74,5 – 86,9)

4. Efficacy [%] against DASYBR in winter oil seed rape:

Type of ASS	**0,2 l/ha**	**0,25 l/ha**	**0,3 l/ha**	**Ref.**
Reduction in the percentage of damaged pods 2-6 DAA (3	41,3 (14,6 – 75,2)	49,7 (18,5 – 76,4)	53,4 (34,3 – 75,8)	40,9 (10,9 – 76,1)

trials)				
Reduction in the percentage of damaged pods 14 -16 DAA (5 trials)	73,8 (49,2 – 92,3)	76,4 (47,1 – 95,0)	81,3 (61,8 – 96,4)	75,8 (46,8 – 88,1)
Control of larvae per pod 21-28 DAA (5 trials)	80,2 (64,6 – 93,3)	86,0 (65,9 – 97,3)	87,8 (65,9 – 98,3)	84,1 (68,9 – 92,7)

5. Efficacy [%] against MELIAE in winter oil seed rape

Type of ASS	0,2 l/ha	0,25 l/ha	0,3 l/ha	Ref.
Control of adults 1-2 DAA (8 trials)	79,9 (45,5 – 89,3)	82,5 (48,5 – 91,8)	87,6 (74,1 – 95,7)	84,6 (79,9 – 93,3)
Control of adults 4-6 DAA (8 trials)	70,6 (33,8 – 94,6)	73,3 (49,3 – 96,0)	79,2 (58,6 – 96,3)	73,3 (49,2 – 93,6)
Control of adults 8-10 DAA (5 trials)	75,8 (45,5 – 90,6)	77,6 (40,2 – 91,7)	77,5 (40,2 – 91,7)	74,3 (46,2 – 88,0)

6. Efficacy [%] against PYRUNU in maize at dose rate 0,3 l/ha:

Type of ASS	0,3 l/ha	Ref.
Percentage of plants with larvae, 13-43 DAA	66,0 (58,5-77,5)	73,1 (63,3-78,4)
Holes per plant, 13-43 DAA	67,8 (56,5-85,4)	77,5 (74,4-82,7)
Larvae per plant, above the husk, 13-43 DAA	71,9 (60,2-80,4)	74,0 (72,1-77,6)
Larvae per plant, below the husk, 13-43 DAA	66,3 (50,0-85,7)	78,9 (66,0-85,8)
Larvae per plant, in the husk, 13-43 DAA	72,6 (47,9-89,1)	84,3 (75,0-92,3)
Percentage of plants damaged above the husk, 48-94 DAA	59,9 (39,3-72,0)	69,2 (56,5-80,8)
Percentage of plants damaged below the husk, 48-94 DAA	81,2 (66,7-100)	82,1 (72,1-100)
Percentage of plants with a broken husk, 48-94 DAA (3 trials)	72,2 (50,0-91,7)	68,7 (50,0-79,2)
Percentage total plants damaged, 48-94 DAA	61,5 (79,7-74,1)	71,3 (67,0-74,8)

7. Efficacy [%] against DIABVI in maize at dose rate 0,2 l/ha:

Type of ASS	0,2 l/ha	Ref.
Control 2-4 DAA	75,2 (50,7 – 100)	71,2 (79,9 – 93,3)
Control 6-8 DAA	80,8 (44,3 – 99,0)	73,6 (22,0 – 98,0)
Control 12-18 DAA	62,0 (31,0 – 95,6)	61,2 (31,0 – 90,2)

In trials the following assessments were done: the number of adults per plot, the number of adults found on 30 plants, the number in one trap, the number in three traps. To compare results from trials, the Applicant used the Henderson-Tilton method for transformation data.

8. Efficacy [%] against LEMAME in winter wheat at dose rate 0,15 l/ha - 0,2 l/ha:

Type of ASS	0,15 l/ha	0,2 l/ha	Ref.
Control of adults per leave at 3 DAA	91,9 (90,0 – 93,3)	96,2 (95,0 – 97,0)	94,1 (92,9 – 95,7)
Control of adults per leave at 8-9 DAA	89,7 (87,0 – 91,6)	94,0 (90,6 – 95,7)	91,4 (85,4 – 93,5)

Control of larvae per leave at 3 DAA	92,2 (90,6 – 93,4)	96,5 (95,9 – 97,1)	95,2 (94,1 – 96,4)
Control of larvae per leave at 8-9 DAA	90,5 (87,7 – 92,0)	95,1 (93,1 – 95,9)	93,9 (93,0 – 94,9)

Additionally percent damage leaves at 8-9 DAA were estimated in trials, according to EPPO Standard PP1/236 (1) *Oulema* spp. on cereals. Percent damage leaves amounted 6,2 for dose rate 0,15 l/ha and 5,2 for 0,2 l/ha.

Moreover the Applicant presented 10 trials carried out against *Ceutorhynchus sp.* which might be treated as supportive for results against CEUTAS and CEUTQU. In those trials the product efficacy amounted (presented as a number of holes 14-40 DAA per plant): 62,6%, 66,3%, 70,4% for dose rates 0,2 l/ha, 0,25 l/ha, 0,3 l/ha respectively. The efficacy of reference product was on the level of 67,7%.

The Applicant presented less than minimal number 6 trials for the following combination major crop/pest: DASYBR (5 trials) and DIABVI (5 trials), PYRUNU (4 trials). What is more for PYRUNU data trials were carried out in only one season. A similar situation is for LEMAME, for which the Applicant presented trials conducted in one season (2019, RO), but presented appropriate number 6 of trials. It is for decision of cMS whether above mentioned trials and results are sufficient to prove efficacy of LEPTOSAR 200SL.
What is more, the Applicant declared in the GAP table the use of the product against LEMAME for spring and winter wheat (TRZAX), hard wheat (TRZDU), spelt wheat (TRZSP), rye (SECCE) in RO. In Evaluator opinion the data for LEMAME might be extrapolated from winter wheat on other cereals, but at least 1 – 2 trials should be presented for every extrapolated crop. It is for decision of cMS RO whether data presented for winter wheat against LEMAME will be sufficient also for other cereals.

Nevertheless, it might be concluded that the post-emergence application of LEPTOSAR 200 SL provides benefit against:

5. CEUTNA at 0,2 – 0,3 l/ha dose rates
6. CEUTAS at 0,2 – 0,3 l/ha dose rates
7. CEUTQU at 0,2 – 0,3 l/ha dose rates
8. MELIAE at 0,2 – 0,3 l/ha dose rates

on winter oil seed rape comparable or better with standard products: Apis 200 SE and Mospilan.

Yield (and relevant quality indicators), from efficacy trials (in the presence of challenging pest populations)

A number of the efficacy trials with significant pest populations were harvested (53 of 85 trials). Details of these trials are presented in Table 3.2-27 and 3.2-28. The objective was to confirm the yield response of LEPTOSAR 200SL in the presence of a range of pest species.

Table 3.2-27: Numbers of trials conducted in the Maritime/South-eastern/North-eastern zone which were harvested

Targets	Crop/ situation	Coun-try	Years	Type of trial	Number of trials harvested (number of valid trials)			GEP, non-GEP, official	Comments (any other relevant infor-mation)
					Maritime zone	South-eastern zone	North-eastern zone		
Insect pests	BRSNW	CZ	2017	MED, E, S, Y, Q	2 (2)			GEP	
	BRSNW		2018		3 (6)				
	ZEAMX		2018		2 (2)				
	BRSNW		2019		2 (2)				
					9 (12)			**GEP**	
	BRSNW	DE	2018		1 (4)				
	BRSNW		2019		2 (3)				
					3 (7)			**GEP**	
	BRSNW	HU	2017	MED, E, S, Y, Q		2 (2)		GEP	
	ZEAMX		2017			1 (1)			
	BRSNW		2018			3 (7)			
	ZEAMX		2018			2 (4)			
	BRSNW		2019			2 (4)			
						10 (18)		**GEP**	
	BRSNW	PL	2017	MED, E, S, Y, Q			0 (6)	GEP	
	ZEAMX		2017				3 (3)		
	BRSNW		2018				7 (8)		
	ZEAMX		2018				2 (2)		
	BRSNW		2019				2 (2)		
							14 (21)	**GEP**	
	BRSNW	RO	2017	MED, E, S, Y, Q		2 (2)		GEP	
	ZEAMX		2017			0 (1)			
	BRSNW		2018			4 (4)			
	ZEAMX		2018			3 (3)			
	BRSNW		2019			4 (7)			
	TRZAW		2019			3 (6)			
						16 (23)		**GEP**	
	BRSNS	UK	2018	MED, E, S, Y, Q	0 (1)			GEP	
	BRSNW		2018		0 (1)				
	BRSNW		2019		1 (2)				
					1 (4)			**GEP**	
TOTAL	-	-		-	**13 (23)**	**26 (41)**	**14 (21)**	-	

Table 3.2-28: Details of trials conducted in the Maritime/South-eastern/North-eastern zone which were harvested

Guidelines	General guidelines	EPPO PP 1/152, PP 1/135, PP 1/181, PP 1/225
	Specific guidelines	EPPO PP 1/178, PP 1/219, PP 1/13, PP 1/236, PP 1/107, PP 1/220, PP 1-274
Experimental design	Plot design	RCBD (53)
	Plot size	16-1200 m²
	Number of replications	4 (53)
Crop	Trials per crop	BRSNW: (37) TRZAW: (3) ZEAMX: (13)
	Varieties per crop	BRSNW: Alicante (1), Architect F1 (1), Arsenal (3), Atora (1), Bonanza (1), Chobry (1), DK Exception(1), DK Expression (1), DK Extorm (1), Exquisite (1), Fencer (2), Galacti (3), Hybirock (7), Imido (2), Imperial (1), Jumper (2), Memori CS (1), Monolit (1), Oriolus F1 (1), PT264F1 (1), Raffiness (1), Rohan (2), Taifun (1). TRZAW: Glosa (1), Renan (1), Sorial (1) ZEAMX: DKC 4014 (1), DKC 4943 (1), GK Sarolta (1), LG 233 (1), P9025 (2), P9074 (1), PR39A98 (1), Prosna PAO 220 (1), SY Multiplas (1), Turda 332 (2), 9903 (1).
	Sowing period	BRSNW:August (30), September (6), October (1). TRZAW: September (2), October (1) ZEAMX: April (9), May (4)
Application	Crop stage (BBCH)* at application	BRSNW: BBCH 31-39 (6), BBCH 50-59 (17), BBCH 60-71 (14) TRZAW: BBCH 65 (3) ZEAMX: BBCH 51-59 (7), BBCH 61-73 (6)
	Timing Pest stage at application (1)	Pests present or predicted by official organisations
	Number of applications Intervals between applications	1 (53 trials)
	Spray volumes	200 - 500 L/ha
Assessment	Assessment types	% damaged pods, % dead plants, % damaged above husk, % damaged below husk, % with broken husk, % with larvae, 5 plants damaged, adults per plant, adults per leaf, holes per plant, holes per pod
	Assessment dates	1-7 DAT, 8-14 DAT, 15-21 DAT, 23-28 DAT, 29-45 DAT, 47-94 DAT
Other relevant information	*e.g.* Natural / artificial innoculation…	All natural infestations
	e.g. Field / Greenhouse...	All trials were conducted in the field
	...	All trials were conducted according to GEP

* BBCH for weeds, pre-emergence, preventive / curative application, insect stage…

A summary of the total yield data from efficacy trials is presented in

Table 3.2-29.
A summary of the yield quality data from efficacy trials is presented in

Table 3.2-30.

Table 3.2-29: Yield effect of LEPTOSAR 200 SL in efficacy trials

TARGET	EP-PO	TRI-ALS	Untreated Check MT/HA			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recom-mended rate, com-pared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
BRSNW Proposed rates 0.15-0.3L/ha	MA	11	**3.8**	1.7	6.6	**101.8**	93.3	117.0	**99.4**	85.1	110.3	**101.0**	90.1	107.4	**100.6**	87.0	117.1	**103.0**	93.3	110.8	1	-	10
	NE	9	**3.1**	2.4	3.6	**110.9**	101.5	129.7	**111.9**	101.7	131.0	**112.9**	101.7	132.9	**115.6**	105.6	131.6	**113.6**	104.0	131.1	7	-	2
	SE	17	**3.2**	1.2	7.8	**101.4**	88.2	114.0	**102.2**	77.2	115.6	**103.0**	77.2	117.7	**103.6**	71.9	121.0	**103.5**	68.8	113.6	5	-	12
	ALL	37	**3.4**	1.2	7.8	**103.8**	88.2	129.7	**103.7**	77.2	131.0	**104.8**	77.2	132.9	**105.7**	71.9	131.6	**105.8**	68.8	131.1	13	-	24
ZEAMX Proposed rates 0.15-0.3L/ha	MA	2	**5.2**	3.4	7.1	**97.6**	83.6	111.7	**114.5**	108.5	120.6	-	-	-	**118.9**	112.1	125.8	**126.6**	115.6	137.6	1	-	1
	NE	5	**8.5**	6.9	10.5	**106.0**	99.1	110.0	**107.6**	99.7	111.3	-	-	-	**108.3**	98.8	113.5	**112.7**	99.5	122.4	1	-	4
	SE	6	**9.1**	7.3	10.4	**102.2**	90.4	110.3	**102.8**	87.7	111.7	-	-	-	**106.0**	104.3	108.8	**104.5**	95.8	111.6	-	-	6
	ALL	13	**8.3**	3.4	10.5	**102.9**	83.6	111.7	**106.4**	87.7	120.6	-	-	-	**109.7**	98.8	125.8	**111.0**	95.8	137.6	2	-	11
TRZAW Proposed rates 0.15-0.2L/ha	SE	3	**5.5**	5.1	6.1	**103.8**	102.2	104.6	**104.7**	103.3	105.7	-	-	-	-	-	-	**104.1**	103.0	104.9	3	-	-

Table 3.2-30: Quality effect of LEPTOSAR 200 SL in efficacy trials

TARGET	EP-PO	TRI-ALS	Untreated Check			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommend-ed rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
BRSNW % oil content Proposed rates 0.15-0.3L/ha	MA	9	**44.7**	39.3	49.6	**100.5**	99.3	101.	**99.9**	98.8	100.	**100.1**	98.9	100.	**99.9**	98.7	101.	**100.2**	99.5	101.	-	-	9
	NE	4	**43.0**	36.5	46.7	**100.9**	99.9	101.	**101.4**	100.	102.	**101.1**	100.	102.	**101.0**	100.	102.	**100.9**	100.	102.	1	-	3
	SE	11	**39.3**	32.5	47.0	**100.6**	99.1	102.	**101.5**	100.	103.	**101.3**	99.8	103.	**101.6**	99.9	103.	**101.2**	99.8	102.	-	-	11
	ALL	24	**41.9**	32.5	49.6	**100.6**	99.1	102.	**100.9**	98.8	103.	**100.8**	98.9	103.	**100.9**	98.7	103.	**100.7**	99.5	102.	1	-	23
BRSNW TGW (g) Proposed rates 0.15-0.3L/ha	MA	11	**4.5**	3.8	5.3	**100.1**	97.8	108.	**99.6**	94.6	103.	**99.8**	95.9	103.	**100.3**	99.1	102.	**100.3**	97.6	102.	-	-	11
	NE	9	**4.7**	3.8	5.6	**102.5**	99.8	105.	**101.3**	96.2	106.	**103.7**	97.5	110.	**103.0**	98.7	110.	**103.7**	99.1	112.	4	-	5
	SE	17	**4.5**	3.6	4.9	**102.9**	100.	106.	**103.0**	98.4	107.	**103.6**	98.0	110.	**103.9**	99.6	109.	**103.3**	96.0	108.	6	-	11
	ALL	37	**4.6**	3.6	5.6	**102.3**	97.8	108.	**101.6**	94.6	107.	**102.5**	95.9	110.	**102.6**	98.7	110.	**102.5**	96.0	112.	1	-	27
BRSNW HLW(kg) Proposed rates 0.15-0.3L/ha	MA	5	**66.7**	53.4	74.8	**100.1**	99.8	100.	**100.3**	100.	101.	**99.8**	98.9	100.	**100.1**	99.5	101.	**100.0**	99.6	100.	-	-	5
	NE	4	**70.1**	64.9	72.3	**100.6**	99.9	101.	**100.7**	100.	101.	**100.8**	100.	101.	**101.0**	100.	101.	**100.7**	100.	101.	-	-	4
	SE	7	**62.1**	59.2	68.6	**99.8**	97.9	101.	**100.4**	99.8	101.	**100.1**	96.4	101.	**100.6**	99.1	101.	**100.3**	98.9	101.	-	-	7
	ALL	16	**65.5**	53.4	74.8	**100.1**	97.9	101.	**100.4**	99.8	101.	**100.2**	96.4	101.	**100.5**	99.1	101.	**100.3**	98.9	101.	-	-	16
ZEAMX TGW (g) Proposed rates 0.15-0.3L/ha	MA	2	**145.9**	42.6	249.	**100.6**	100.	100.	**100.3**	100.	100.	-	-	-	**100.4**	100.	100.	**100.6**	100.	100.	-	-	2
	NE	5	**277.3**	252.	315.	**100.0**	98.9	102.	**102.7**	99.2	106.	-	-	-	**101.3**	100.	102.	**100.4**	98.5	101.	-	-	5
	SE	6	**267.6**	66.0	354.	**101.4**	95.5	108.	**102.9**	100.	111.	-	-	-	**102.1**	101.	102.	**101.8**	94.4	108.	-	-	6
	ALL	13	**252.6**	42.6	354.	**100.7**	95.5	108.	**102.4**	99.2	111.	-	-	-	**101.4**	100.	102.	**101.1**	94.4	108.	-	-	13
ZEAMX HLW (kg) Proposed rates 0.15-0.3L/ha	MA	2	**74.2**	67.3	81.0	**102.1**	99.8	104.	**100.3**	100.	100.	-	-	-	**99.5**	99.2	99.8	**95.4**	92.6	98.2	-	-	2
	NE	2	**68.7**	68.0	69.4	**100.3**	100.	100.	**100.3**	100.	100.	-	-	-	**100.3**	100.	100.	**100.1**	100.	100.	-	-	2
	SE	6	**87.3**	60.8	177.	**100.7**	99.5	102.	**100.8**	98.5	103.	-	-	-	**101.4**	100.	102.	**101.9**	99.2	106.	-	-	6
	ALL	10	**81.0**	60.8	177.	**101.0**	99.5	104.	**100.6**	98.5	103.	-	-	-	**100.6**	99.2	102.	**100.0**	92.6	106.	-	-	10
TRZAW TGW (g) Proposed rates 0.15-0.2L/ha	SE	3	**39.1**	34.7	43.5	**100.4**	99.5	100.8	**100.8**	100.5	101.2	-	-	-	-	-	-	**100.5**	100.0	100.9	-	-	3

TARGET	EP-PO	TRI-ALS	Untreated Check			LEPTOSAR 200 SL 0.15 L/ha			LEPTOSAR 200 SL 0.2 L/ha			LEPTOSAR 200 SL 0.25 L/ha			LEPTOSAR 200 SL 0.3 L/ha			REFERENCE			LEPTOSAR 200 SL at maximum recommend-ed rate, compared to reference		
			MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	MEAN	Min	Max	>	<	=
TRZAW HLW (kg) Proposed rates 0.15-0.2L/ha	SE	3	**73.2**	69.4	77.9	**100.3**	100.0	100.9	**100.3**	100.0	100.9	-	-	-	-	-	-	**100.1**	99.8	100.6	-	-	3

A summary of the results and a conclusion should be provided.

LEPTOSAR 200 SL at the proposed label rates of up to 0.3L/ha had a positive effect on total yield in 13 out of 37 trials in BRSNW, two of 13 trials in ZEAMX and all three of the TRZAW trials. No negative effect were observed on the yield or its quality parameters at any crop.

Summary and conclusion

LEPTOSAR 200 SL at the proposed label rates achieved high levels of control of key insect pests in BRSNW, ZEAMX and TRZAW. Overall performance was at least comparable to that of the reference products.

Comments of zRMS:	Yield was checked in 53 efficacy trials. No negative impact was observed on yield when LEPTOSAR 200 SL was applied at dose rate up to 0,3 l/ha.

3.3 Information on the occurrence or possible occurrence of the development of resistance (KCP 6.3)

3.3.1 Resistance Risk Assessment

3.3.1.1 Assessment of the inherent risk

Active ingredient

LEPTOSAR 200 SL contains the active ingredient acetamiprid.

Mode of action

Acetamiprid is a selective, neonicotinoid insecticide, with translaminar and systemic properties. It is in Insecticide Resistance Action Committee (IRAC) insecticide Group 4A. The compound binds to the acetylcholine site on nAChRs, causing a range of symptoms from hyper-excitation to lethargy and paralysis. Acetylcholine is the major excitatory neurotransmitter in the insect central nervous system.

General Remarks on resistance to this mode of action

The first neonicotinoid insecticide, imidacloprid, was launched in 1991. Today this class of insecticides comprises at least seven major compounds with a market share of more than 25% of total global insecticide sales. Neonicotinoid insecticides are highly selective agonists of insect nicotinic acetylcholine receptors and provide farmers with invaluable, highly effective tools against some of the world's most destructive crop pests. These include sucking pests such as aphids, whiteflies, and planthoppers, and also some coleopteran, dipteran and lepidopteran species. Although many insect species are still successfully controlled by neonicotinoids, their popularity has imposed a mounting selection pressure for resistance, and in several species resistance has now reached levels that compromise the efficacy of these insecticides. Research to understand the molecular basis of neonicotinoid resistance has revealed both target-site and metabolic mechanisms conferring resistance. For target-site resistance, field-evolved mutations have only been characterized in two aphid species. Metabolic resistance appears much more common, with the enhanced expression of one or more cytochrome P450s frequently reported in resistant strains. (Bass *et al*. 2015).

Mechanisms of Resistance

Research to understand the molecular basis of neonicotinoid resistance has revealed both target-site and metabolic mechanisms conferring resistance. For target-site resistance, field-evolved mutations have only been characterized in two aphid species. Metabolic resistance appears much more common, with the en-

hanced expression of one or more cytochrome P450s frequently reported in resistant strains. (Bass *et al*. *op cit.*).

Characterisation of strains

Populations of resistant pests are monitored by IRAC. Currently none of the pests included in this submission are resistant to neonicotinoid insecticides. Some populations of MELIAE and PYRUNU in Europe are resistant to pyrethroid insecticides. No cross resistance to neonicotinoids has been reported in these populations.

3.3.1.2 Unrestricted use pattern

A pattern of use without any restrictions could include the use of LEPTOSAR 200 SL any number of times during the crop growth period, with no limits on the number of applications or the use of other products.

3.3.1.3 Unmodified risk

The unrestricted use pattern would probably cause an increase in the risk of the development of resistant populations, as it would increase the exposure of the pests to the chemistry. This risk is unacceptable for the future use of the product.

3.3.2 Resistance risk management

The use of this product without any restrictions or recommendations for risk mitigation is clearly unacceptable. However, this product has the potential to be an extremely useful part of resistance management strategies in oilseed rape, maize and wheat.

The use pattern should therefore be modified by an appropriate resistance management strategy.

3.3.2.1 Proposed Resistance Management Strategy

The risk of pests developing resistance to insecticides can be reduced by various means.

(1) Crops should be inspected before the use of the product.

(2) Spray crops only when the pest populations meet the local threshold.

(3) If a spray is necessary, consider the use of alternate modes of action.

Suitable label text is already incorporated into the draft label of LEPTOSAR 200 SL, in order to make these strategies clear to growers.

3.3.3 Sensitivity data

It is impossible to establish baseline sensitivity for the pests susceptible to LEPTOSAR 200 SL, as they have been exposed to neonicotinoid insecticides for some time. This is supported by IRAC (*op. cit.*). The efficacy data submitted here indicates that LEPTOSAR 200 SL is currently effective against the target pests.

3.3.4 Summary and Conclusions

The risk for the development of resistance of target species were analysed following EPPO guideline PP1/213 (4). As resistance to this class of chemistry already exists in field populations of pests not included in the proposed product label, an anti-resistance strategy has been developed and described.

Study Comments: 3.3 dRR point 3.3	**EN:** Strategy is acceptable.
EN: Evaluator conclusion: The active substance acetamiprid belongs to the 4 main group - Nicotinic acetylcholine receptor (nAChR) competitive modulators and 4A sub-group – Neonicotinoids in accordance with IRAC classification. Currently 3 strains of pest insect resistant to neonicotinoid insecticides were found: *Myzus persicae, Aphis gossypii, Nilaparvata lugens.* None of the pests included in this dossier are resistant to neonico-	

tinoid insecticides.
The applicant proposed resistance management strategy in order not to develop resistance to the insecticide which which corresponds to the IRAC recommendations.

3.4 Adverse effects on treated crops (KCP 6.4)

3.4.1 Phytotoxicity to host crop (KCP 6.4.1)

In the efficacy trials for LEPTOSAR 200 SL reported in this dossier, assessments were also made for crop safety. All trials were assessed for phytotoxicity, with symptoms reported as they were observed. In all trials no phytotoxicity was observed in any trial, at any use rate. Consequently, data for those trials are not tabulated in this dossier.

According to EPPO PP 1/135, 'for fungicides and insecticides…observations of phytotoxic effects should be made in the direct efficacy (effectiveness) trials. If any adverse effects occur in any of the effectiveness…trials at N dose, then…specific crop safety trials should be conducted.'

As no phytotoxic effects were observed in any effectiveness trial, no specific crop safety trials were sprayed. Numbers of trials with their highest use rate tested are summarised in Table 3.4-1

Table 3.4-1: Phytotoxic effect of LEPTOSAR 200 SL in efficacy trials

Crop	Number of trials with…		Efficacy trials (85 trials)			
			Test product			Standard
			0.2L/ha	0.25L/ha	0.3L/ha	N
BRSNS	Maximum of phytotoxicity recorded during the trials	0% to 5%	-	-	1	1
		>5% to 10%				
		>10% to 15%				
		>15 %				
	Level of symptoms at the last assessments	0% to 5%	-	-	1	1
		>5% to 10%				
		>10% to 15%				
		>15 %				
BRSNW	Maximum of phytotoxicity recorded during the trials	0% to 5%	-	4	59	63
		>5% to 10%				
		>10% to 15%				
		>15 %				
	Level of symptoms at the last assessments	0% to 5%	-	4	59	63
		>5% to 10%				
		>10% to 15%				
		>15 %				
ZEAMX	Maximum of phytotoxicity recorded during the trials	0% to 5%	5	-	11	16
		>5% to 10%				
		>10% to 15%				
		>15 %				
	Level of symptoms at the last assessments	0% to 5%	5	-	11	16
		>5% to 10%				

Crop	Number of trials with…		Efficacy trials (85 trials)			
			Test product			Standard
			0.2L/ha	0.25L/ha	0.3L/ha	N
		>10% to 15%				
		>15 %				
TRZAW	Maximum of phyto-toxicity recorded during the trials	0% to 5%	6	-	-	6
		>5% to 10%				
		>10% to 15%				
		>15 %				
	Level of symptoms at the last assessments	0% to 5%	6	-	-	6
		>5% to 10%				
		>10% to 15%				
		>15 %				

No phytotoxicity symptom caused by LEPTOSAR 200 SL at any of the proposed dose rate, up to 0.3L/ha, in any trial, in any of the crops tested.

Comments of zRMS:	The applicant tested phytotoxicity in all effectiveness trials. The maximum tested dose rates was 0,2 l/ha, 0,25 l/ha an 0,3 l/ha. No phytotoxicity symptoms were observed in the efficacy tests. What is more to assess phytotoxicity for PL, the Evaluator took also under consideration trials from CZ and DE. All those trials showed that BRSNW is expected to be safe when the product is applied between BBCH 30-71.

3.4.2 Effect on the yield of treated plants or plant product (KCP 6.4.2)

According to EPPO PP 1/135, 'for fungicides and insecticides…observations of phytotoxic effects should be made in the direct efficacy (effectiveness) trials. If any adverse effects occur in any of the effectiveness…trials at N dose, then…specific crop safety trials should be conducted.'

As no phytotoxic effects were observed in any effectiveness trial, no specific crop safety trials were conducted.

However, a number of the efficacy trials were harvested (53 of 85 trials). Summary of the results of yield are presented in Table 3.2-30.

LEPTOSAR 200 SL at the proposed label rates of up to 0.3L/ha had no negative effect on yield of oilseed rape, maize and winter wheat. Therefore it is justified to claim that LEPTOSAR 200 SL is safe for crop when applied according to GAP table.

Comments of zRMS:	To establish an effect of the product on the yield the following parameters were tested: - for winter oil seed rape: % oil content, Thousand Grain Weight, Hectolitre Weight (24 trials in CZ, DE, UK, PL, RO, HU, 2017-2019) - for maize: Thousand Grain Weight, Hectolitre Weight (13 trials in CZ, DE, PL, RO, HU, 2017-2019) - for winter wheat: Thousand Grain Weight, Hectolitre Weight (3 trials in RO, 2019) No negative effects on the yield of treated plants or plant products are expected after the application of LEPTOSAR 200 SL.

3.4.3 Effects on the quality of plants or plant products (KCP 6.4.3)

According to EPPO PP 1/135, 'for fungicides and insecticides…observations of phytotoxic effects should be made in the direct efficacy (effectiveness) trials. If any adverse effects occur in any of the effectiveness…trials at N dose, then…specific crop safety trials should be conducted.'

As no phytotoxic effects were observed in any effectiveness trial, no specific crop safety trials were conducted.

However, a number of the efficacy trials were harvested (53 of 85 trials). Results of yield and yields quality parameters are presented in Table 3.2-30.

LEPTOSAR 200 SL at the proposed label rates of up to 0.3L/ha had no negative effect on yield and its quality parameters of oilseed rape, maize and winter wheat. Therefore it is justified to claim that LEPTOSAR 200 SL is safe for crop when applied according to GAP table.

Comments of zRMS:	No negative effects on the quality of plants or plant products are expected.

3.4.4 Effects on transformation processes (KCP 6.4.4)

No specific tests for effects on processing procedure conducted with LEPTOSAR 200 SL formulation are available.

According to EPPO PP 1/243 (2) "Effects of plant protection products on transformation Processes" cereals are one of the main crops which may be subjected to transformation processes (baking and brewing), however Applicant demonstrated in the residue trials presented in submitted dossier section B7 that residues are undetectable after application of LEPTOSAR 200 SL. Furthermore, as acetamiprid has not fungicide action, LEPTOSAR 200 SL is not expected to have any detrimental effect of the action of yeast involved in brewing and baking processes. Thus, according to EPPO Standard PP 1/243(2) 'Effects of plant protection products on transformation processes' specific studies are not deemed necessary.

Comments of zRMS:	In case residues was not found in wheat grains (for transformation processes: baking and brewing) negative effects on transformation processes are not expected.

3.4.5 Impact on treated plants or plant products to be used for propagation (KCP 6.4.5)

EPPO standard PP 1/135(4) 'Phytotoxicity assessment' defines specific data for an assessment of possible adverse effects on parts of plants used for propagating purposes.

There are basically no data requirement for EPPO standard PP 1/135(4) 'Phytotoxicity assessment' defines specific data for an assessment of possible adverse effects on parts of plants used for propagating purposes. There are basically no data requirement insecticides.
Moreover, the potential LEPTOSAR 200 SL on the quality of plant or plant products has been assessed separately (refer to point 6.4.3). The results from the evaluation on quality parameters for oilseed rape grains, cereals and maize (i.e. oil content, Thousand Grain Weight etc.) showed that test product had no negative impact on grains of treated crops.
In conclusion, negative effects on plant parts used for propagating purposes (seeds) are not expected applying LEPTOSAR 200 SL as indicates in the proposed GAP.

Comments of zRMS:	No negative effects on treated plants or plant products to be used for propagation are expected.

Summary and conclusion

According to EPPO PP 1/135, 'for fungicides and insecticides…observations of phytotoxic effects should be made in the direct efficacy (effectiveness) trials. If any adverse effects occur in any of the effectiveness…trials at N dose, then…specific crop safety trials should be conducted.' No negative crop effects were observed in any trial, at any use rate. It is therefore reasonable to conclude that LEPTOSAR 200 SL is safe for use on the crops recommended.

3.5 Observations on other undesirable or unintended side-effects (KCP 6.5)

3.5.1 Impact on succeeding crops (KCP 6.5.1)

This section has been prepared in accordance with the EPPO guideline PP 1/207 (2) "Effects on succeeding crops".
The study on the toxicity to non-target terrestrial plants has been carried out with LEPTOSAR 200 SL (A-200SL-OR3-C). For further details please refer to Terrestrial Plant Test according to OECD 208 method (Study code G/152/18, Institute of Industrial Organic Chemistry Branch Pszczyna by Wołany 2019e, presented in in Section 9 of the dRR (chapter 9.10).

The study is described in detail in Section 9 of the dRR (chapter 9.10). For the ER_{50} values of the tested species please refer to Table 3.1.1-1 below.

Table 3.1.1-1: EC_{50}-values (g/ha) of different test plants

Test plant		**ER_{50} for *LEPTOSAR 200 SL* (g ai/ha)**
Common name	**Scientific name (lat.)**	**Seedling-emergence-test**
Carrot	*Daucus carota*	>60.5
Sunflower	*Helianthus annuus*	>60.5
Cabbage	*Brassica olerace var. capitata*	>60.5
Pea	*Pisum sativum*	>60.5
Perennial ryegrass	*Lolium perenne*	>60.5
Oat	*Avena sativa*	>60.5

In the study, doses were indicated as g ai/ha therefore, ER_{50} were recalculated to ER_{50} expressed as mg a.s./kg soil, taking into consideration: bulk density of soil = 1.5 g/cm^3 and soil depth 5 cm.
PEC values were calculated for the worst-case scenario – use in pumpkins with application rate of 1× 60 g ai/ha and CI of 60% relevant for BBCH 21-69 as stated in the GAP table.
These PEC values and TER-calculation based on ER_{50} -values are given in the following table.

Table 3.1.1-2: PEC-values and TER-calculation of LEPTOSAR 200 SL based on ER50 -values.

Succeeding crop(1)	**Days after application(2)**	**ER50 mg/kg soil(3)**	**PEC(4)**		**TER(5)**	
			mg/kg soil e.g. 5 cm	**mg/kg soil e.g. 20 cm**	**ER50/PEC e.g. 5 cm**	**ER50/PEC e.g. 20 cm**
All tested species	0	0.0807	0.0320	0.0080	2.52	10.09

(1) possible following crops in a regular crop rotation
(2) adequate value for following crop in a regular crop rotation
(3) ER50 -values of succeeding crops
(4) PEC (soil depth e.g. 5/20 cm)
(5) TER (soil depth e.g. 5/20 cm)

As it was indicated above, TER value was >1 just after application of the product, therefore the risk is acceptable. If it is necessary to liquidate a plantation treated with the product as a result of damage to plants by frosts, diseases or pests after performing pre-sowing cultivation, other plants can be grown.

Comments of zRMS:	The risk of adverse impact of LEPTOSAR 200 SL on succeeding crops is not expected.

3.5.2 Impact on other plants including adjacent crops (KCP 6.5.2)

This section has been prepared in accordance with the EPPO guideline PP 1/256 (1) "Effects on adjacent crops".

PEC values (drift) were calculated for different distances between treated and adjacent crops. The results are given in the following table.

Table 3.5.2-1: PEC-values for single application (drift) in field crops[1] and vegetables height < 50 cm [2] with maximum use rate of 0.3 L product/ha and according to Ganzelmeier, BBA 1995

Distance to adjacent crop (m)	% drift	Drift test product (L/ha)
1	2.77	0.00831
3	0.95	0.02850
5	0.57	0.00171

Table 3.5.2-2: PEC-values for single application (drift) in vegetables height >50 cm [3] with maximum use rate of 0.3 L product/ha and according to Ganzelmeier, BBA 1995

Distance to adjacent crop (m)	% drift	Drift test product (L/ha)
3	8.02	0.024
5	3.62	0.011
10	1.23	0.004

[1] Relevant for oil seed rape, cereals, maize, flax, hemp, poppy, sunflower in the GAP table for LEPTOSAR 200 SL
[2] Relevant for pumpkin in the GAP table for LEPTOSAR 200 SL
[3] Relevant for soybean in the GAP table for LEPTOSAR 200 SL

Table 3.5.2-3: PEC-values for single application (drift) in fruit crops[4] with maximum use rate of 0.3 L product/ha or 2×0.15 L product/ha and according to Ganzelmeier, BBA 1995

Distance to adjacent crop (m)	% drift	Drift test product (L/ha)
3	29.20	0.073
5	19.89	0.050
10	11.81	0.030

The study on the toxicity to non-target terrestrial plants has been carried out with LEPTOSAR 200 SL (A-200SL-OR3-C). For further details please refer to Terrestrial Plant Tests according to the OECD Guideline No. 208 and 227 (2006) STUDY CODEs: G/151/18, G/152/18 Institute of Industrial Organic Chemistry Branch Pszczyna by Wołany 2019 e,f presented in in Section 9 of the dRR (chapter 9.10).

For the ER50 values derived in the studies for all tested species please refer to Table 3.5.2-4 below.

Table 3.5.2-4: ER_{50}-values (L/ha) of different test plants

Test plant		ER_{50} *LEPTOSAR 200 SL* (L/ha)	
Common name	**Scientific name (lat.)**	**Seedling-emergence-test**	**Vegetative-vigour-test**
Carrot	*Daucus carota*	>0.3	>0.3
Sunflower	*Helianthus annuus*	>0.3	>0.3
Cabbage	*Brassica olerace var. capitata*	>0.3	>0.3
Pea	*Pisum sativum*	>0.3	>0.3
Perennial ryegrass	*Lolium perenne*	>0.3	>0.3
oat	*Avena sativa*	>0.3	>0.3

In the following tables TER values are presented finally.

Table 3.5.2-5: TER values of LEPTOSAR for different crops presented in GAP at minimum distance after application

Crops	ER_{50} (L product/ha)	TER
Field crops 1 m distance		
All species tested	0.3	36.10
Vegetables > 50 cm height 3 m distance		
All species tested	0.3	12.47

[4] Relevant for apple, pear, cherry, apricot, quince, peach, nectarine, plum, tree nuts, tobacco, common osier, purple willow, forest nurseries and Christmas trees plantations in the GAP table for LEPTOSAR 200 SL

Fruit crops 3 m distance		
All species tested	0.3	4.11

Summarising results achieved above, an acceptable risk is indicated for terrestrial non-target plants, even when no buffer strip is applied. The respective TER values are >1, as requested in EPPO guideline PP 1/256. No further testing required.

Comments of zRMS:	The risk of impact on other plants including adjacent crops of LEPTOSAR 200 SL is not expected even though when no buffer strip is applied.

Tank cleaning

An insufficient tank cleaning after use of LEPTOSAR 200 SL can cause negative effects on the next crops. Therefore, an appropriate tank cleaning might have to be performed after application of the product.
According to Appendix 4 of EPPO guideline PP 1/292(1), up to 2.6% of the spray solution will remain in the PAE following application (according to ISO 16119).

The following evaluation is presented for the worst – case scenario from the GAP table - assuming dose of 0.3 L product/ha in 200 L of water/ha and 200 g ai/ L of the product:

Table 3.5.2-4: Calculation of washout according to Appendix 4 of EPPO PP 1/292(1)

Calculations	
Amount of a.i. in 1000 L sprayer (assuming 200 L ha^{-1} water)	1000/200 = 5 5 x 0.3 L product (appl. dose in 1 ha) = 1.5 L product in 1000 L sprayer = 300 g ai in 1000 L sprayer
Amount left in sprayer after spraying (2.6%)	300 g ai x 2.6% = 7.8 g ai
Situation A (without washing)	
Dose applied (at 200 L/ha) to 2.5 ha (without washing)	7.8 g ai / 2.5 ha = 3.12 g ai /ha
Situation B (one washout - procedure)	
Amount of product left in sprayer after 1st stage of washout procedure (washing tank with 1000 L water and then empty it)	7.8 g ai x 2.6% = 0.203 g ai
Dose applied (at 200 L/ha) to 2.5 ha after first washout procedure	0.203 g ai / 2.5 ha = 0.0811 g ai/ha

The studies for non-target plants showed (please refer to respective chapter in section 9 of the dRR) that ER50 for all tested species was > 60.5 g ai /ha. Assuming a leftover of 2.6% of the spray solution, which results in 3.12 g ai/ha, the TER value without washing (situation A of the table above) is 19.4 which is above the trigger value of 1 and indicate no unacceptable risk risk. No special instruction for cleaning procedures are required.

Comments of zRMS:	The Applicant used a calculation method to estimate the effectiveness cleaning of spray application equipment after the use of LEPTOSAR 200 SL. No special instruction for cleaning procedures are required.

3.5.3 Effects on beneficial and other non-target organisms (KCP 6.5.3)

In all of the trials, no observations concerning any adverse impact on beneficial or non-target organisms were reported.

More detailed information on risks to non-target organisms can be found in the submission dossier in the section on Ecotoxicology.

3.6 Other/special studies

No data to present.

3.7 List of test facilities including the corresponding certificates

Table 3.7-1: List of test facilities

Name	Address	GEP certificate Yes/No
Agreco Sp. z. o. o.	al. Lipowa 21, lok. 1, 53-124 Wrocław, Poland	Yes
Agrofil SZMI Kft. (continued from JS Agro-test Kft.)	H-8800 Nagykinzs Zemplén Gyözö u.7/B Hungary	Yes
Agroprospect SRL	Fântâna No. 1, Jud. Brasov, Romania	Yes
ATC - Agro Trial Center GmbH, organizačni složka	Blatnicka 179 Uhersky Ostroh, Czech Republic 687 24	Yes
Eurofins Agroscience Services	Slade Lane, Wilson, Melbourne, Derbyshire, DE73 8AG, United Kingdom	Yes
Eurofins Agroscience Services Sp. z o.o.	ul. Parkowa 6 64-530 Kaźmierz Poland	Yes
Fertico Sp. z.o.o.	Goliany 43, 05-620 Błedów Poland	Yes
Hetterich Fieldwork GbR	Bamberger Straße 50 Schwarzach am Main 97359 Germany	Yes
Oxford Agricultural Trials Ltd.	West Farm Barns, Launton Road Stratton Audley Bicester OX27 9AS UK	Yes

Name	Address	GEP certificate Yes/No
Staphyt Romania	Street Iezerului No.8, County Ialomita SLOBOZIA 920002 Romania	Yes
SynTech Research Czech s. r. o	Semčice 245 294 46 Semčice Czech Republic	Yes
SynTech Research Hungary Kft.	Török Ignác u. 30. Szombathely Hungary	Yes
SynTech Research Poland Sp. z o.o.	69/1 Jagiellonska 85-027 Bydgoszcz Poland	Yes

Appendix 1 Lists of data considered in support of the evaluation

List of data submitted by the applicant and relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2, 6.4-01	Błażej Koralewski	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) Fertico Sp. z o.o. Study ID: 136_01_F18_273 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-02	Michał Misiórny	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) Fertico Sp. z o.o. Study ID: 137_01_F18_274 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-03	Błażej Koralewski	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. Fertico Sp. z o.o. Study ID: 138_01_F18_276 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-04	Dawid Michałowicz	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. Fertico Sp. z o.o. Study ID: 139_01_F18_277 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-05	Błażej Koralewski	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. Fertico Sp. z o.o. Study ID: 139_02_F18_278 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2, 6.4-06	Dariusz Porzecki	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil Fertico Sp. z o.o. Study ID: 140_01_F18_279 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-07	Michał Misiórny	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil Fertico Sp. z o.o. Study ID: 141_01_F18_280 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-08	Gabriel Puszka	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil Fertico Sp. z o.o. Study ID: 141_02_F18_281 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-09	Marta Krasoń	2018	Evaluation of the efficacy of A-200-SL-OR3-CPd applied in maize to control Ostrinia nubilalis Fertico Sp. z o.o. Study ID: 142_01_F18_282 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-10	Marta Krasoń	2018	Evaluation of the efficacy of A-200-SL-OR3-CPd applied in maize to control Ostrinia nubilalis Fertico Sp. z o.o. Study ID: 143_01_F18_283 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-11	Katarzyna Furman-Fratczak	2017	The efficacy and selectivity of A-200SL-OR3-C for the control of Meligethes aeneus (Pollen Beetle) on winter oillseed rape AGRECO Sp. z o.o. Study ID: A-200 SL-OR3-C Meligethes 01 GEP: Yes	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Unpublished		
KCP 6.2, 6.4-12	Katarzyna Furman-Fratczak	2017	The efficacy and selectivity of A-200SL-OR3-C for the control of Meligethes aeneus (Pollen Beetle) on winter oillseed rape AGRECO Sp. z o.o. Study ID: A-200 SL-OR3-C Meligethes 02 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-13	Alexandru Barta	2019	Evaluation of the efficacy of A-200SL-OR3-C against oulema in winter wheat AgroProspect SRL Study ID: A-200SL_RO19_WW_1 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-14	Alexandru Barta	2019	Evaluation of the efficacy of A-200SL-OR3-C against oulema in winter wheat AgroProspect SRL Study ID: A-200SL_RO19_WW_2 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-15	Alexandru Barta	2019	Evaluation of the efficacy of A-200SL-OR3-C against oulema in winter wheat AgroProspect SRL Study ID: A-200SL_RO19_WW_3 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-16	Alexandru Barta	2019	Evaluation of the efficacy of A-200SL-OR3-C against oulema in winter wheat AgroProspect SRL Study ID: A-200SL_RO19_WW_4 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-17	Alexandru Barta	2019	Evaluation of the efficacy of A-200SL-OR3-C against oulema in winter wheat AgroProspect SRL Study ID: GEP: Ye A-200SL_RO19_WW_5 s Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-18	Alexandru Barta	2019	Evaluation of the efficacy of A-200SL-OR3-C against oulema in winter wheat AgroProspect SRL Study ID: A-200SL_RO19_WW_6 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2, 6.4-19	Katarzyna Furman-Fratczak	2017	The efficacy and selectivity of A-200SL-OR3-C for the control of Cabbage seed weevil- Ceutorhynchus assimilis, Brassica pod midge -Dasineura brassicae on winter oilseed rape Chowacz podobnik,Pryszczarek kapustnik AGRECO Sp. z o.o. Study ID: A-200SL-OR3-C PODS 01 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-20	Katarzyna Furman-Fratczak	2017	The efficacy and selectivity of A-200SL-OR3-C for the control of Cabbage seed weevil- Ceutorhynchus assimilis, Brassica pod midge -Dasineura brassicae on winter oilseed rape Chowacz podobnik,Pryszczarek kapustnik AGRECO Sp. z o.o. Study ID: A-200SL-OR3-C PODS 02 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-21	Katarzyna Furman-Fratczak	2017	The efficacy and selectivity of A-200SL-OR3-C for the control of Ceutorhynchus napi and Ceutorhynchus quadridens on winter oilseed rape AGRECO Sp. z o.o. Study ID: A-200SL-OR3-C STEM 01 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-22	Katarzyna Furman-Fratczak	2017	The efficacy and selectivity of A-200SL-OR3-C for the control of Ceutorhynchus napi and Ceutorhynchus quadridens on winter oilseed rape AGRECO Sp. z o.o. Study ID: A-200SL-OR3-C STEM 02 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-23	Stanislav Křížek	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) SynTech Research Czech s.r.o Study ID: A-200SL-OR3-C_CZ_01 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-24	Michał Springer	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) SynTech Research Poland Sp. z o.o.	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Study ID: A-200SL-OR3-C_CZ_02 GEP: Yes Unpublished		
KCP 6.2, 6.4-25	Stanislav Křížek	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge SynTech Research Czech s.r.o Study ID: A-200SL-OR3-C_CZ_03 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-26	Michał Springer	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. SynTech Research Poland Sp. z o.o. Study ID: A-200SL-OR3-C_CZ_04 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-27	Stanislav Křížek	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil SynTech Research Czech s.r.o Study ID: A-200SL-OR3-C_CZ_05 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-28	Michał Springer	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil SynTech Research Czech s.r.o Study ID: A-200SL-OR3-C_CZ_06 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-29	Stanislav Křížek	2018	Evaluation of the efficacy of A-200-SL-OR3-CPd applied in maize to control Ostrinia nubilalis SynTech Research Czech s.r.o Study ID: A-200SL-OR3-C_CZ_07 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2, 6.4-30	Michał Springer	2018	Evaluation of the efficacy of A-200-SL-OR3-CPd applied in maize to control Ostrinia nubilalis SynTech Research Poland Sp. z o.o. Study ID: A-200SL-OR3-C_CZ_08 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-31	Gábor Szilágyi	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) SynTech Research Hungary Kft. Study ID: A-200SL-OR3-C_MELIAE_HU GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-32	Gergő Somody	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_ CEUTNA_HU_1 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-33	Gergő Somody	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_CEUTAS_HU_1 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-34	Lajos Olasz	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_CEUTNA_HU_2 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-35	József Ritecz	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_CUETNA_HU_3	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			GEP: Yes Unpublished		
KCP 6.2, 6.4-36	Stanislav Křížek	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil SynTech Research Czech s.r.o Study ID: A-200SL-OR3-CPd_CZ19_1 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-37	Petr Smahel	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. SynTech Research Czech s.r.o Study ID: A-200SL-OR3-CPd_CZ19_3 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-38	Frank Lindemann	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil Hetterich Fieldwork GbR Study ID: A-200SL-OR3-CPd_DE19_3 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-39	Robert Scheurich	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. Hetterich Fieldwork GbR Study ID: A-200SL-OR3-CPd_DE19_4 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-40	Frank Lindemann	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil Hetterich Fieldwork GbR Study ID: A-200SL-OR3-CPd_DE19_4_CEUTQU GEP: Yes Unpublished	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2, 6.4-41	József Ritecz	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in maize to control Diabrotica virgifera. SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_HU_1 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-42	Gergő Somody	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_HU19_1 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-43	Gergő Somody	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_HU19_2 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-44	Gábor Szilágyi	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_HU19_3 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-45	József Ritecz	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_HU19_4 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-46	Gergő Somody	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_MELIAE_HU_2	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			GEP: Yes Unpublished		
KCP 6.2, 6.4-47	Zdzislaw Jaskolski	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) SynTech Research Poland Sp.zo.o. Study ID: A-200SL-OR3-CPd_PL19_1 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-48	Grzegorz Piotrowski	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. SynTech Research Poland Sp.zo.o. Study ID: A-200SL-OR3-CPd_PL19_2 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-49	Lajos Olasz	2018	Evaluation of the efficacy of A-200-SL-OR3-CPd applied in maize to control Ostrinia nubilalis SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_PYRUNU_HU_1 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-50	Lajos Olasz	2018	Evaluation of the efficacy of A-200-SL-OR3-CPd applied in maize to control Ostrinia nubilalis SynTech Research Hungary Kft. Study ID: A-200SL-OR3-CPd_PYRUNU_HU_2 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-51	Alexandru Barta	2018	Evaluation of the efficacy of A-200-SL-OR3-CPd applied in maize to control Ostrinia nubilalis AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO_1_4 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-52	Alexandru Barta	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in maize to control Diabrotica virgifera. AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO_1_6	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			GEP: Yes Unpublished		
KCP 6.2, 6.4-53	Alexandru Barta	2018	Evaluation of the efficacy of A-200-SL-OR3-CPd applied in maize to control Ostrinia nubilalis AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO_2_4 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-54	Pogacian Cristian	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO-02 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-55	Pogacian Cristian	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO_4 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-56	Alexandru Barta	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO19_1 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-57	Pogacian Cristian	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO19_2 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2,	Constanta Botoman	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes	N	CIECH

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
6.4-58			aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO19_3 GEP: Yes Unpublished		Sarzyna S.A.
KCP 6.2, 6.4-59	Constanta Botoman	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO19_4 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-60	Pogacian Cristian	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO19_5 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-61	Gabriela Burnea	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO19_6 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-62	Pogacian Cristian	2019	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. AgroProspect SRL Study ID: A-200SL-OR3-CPd_RO19_7 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-63	Sebastian Omylanowski	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. Oxford Agricultural Trials Study ID: A-200SL-OR3-CPd_UK_3 V2	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			GEP: Yes Unpublished		
KCP 6.2, 6.4-64	Chris Dickinson	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in spring oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) Oxford Agricultural Trials Study ID: A-200SL-OR3-CPd_UK_3A_R GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-65	Alexandru Barta	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil AgroProspect SRL Study ID: A-200SL-OR3-CPd-RO-03 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-66	Alexandru Barta	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) AgroProspect SRL Study ID: A-200SL-OR3-CPd-RO-1 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-67	Vladimira Bauer Zelená	2017	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus). ATC - Agro Trial Center GmbH, organizacni slozka Study ID: CFZ-17-30850-CZ_03 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-68	Veronika Gezova	2017	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. ATC - Agro Trial Center GmbH, organizacni slozka Study ID: CFZ-17-30851-CZ_05 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2, 6.4-69	Lajos Mihály	2017	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. Agrofil SZMI Kft Study ID: CFZ-17-30851-HU03 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-70	Lajos Mihály	2017	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. Agrofil SZMI Kft Study ID: CFZ-17-30851-HU04 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-71	Adrian MIHALCEA	2017	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge STAPHYT Study ID: CFZ-17-30851-RO01 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-72	Adrian MIHALCEA	2017	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. STAPHYT Study ID: CFZ-17-30851-RO02 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-73	BABRIK Zsolt	2017	Evaluate the efficacy of A-200-SL-OR3-CPd applied in maize to control Diabrotica virgifera. Agrofil SZMI Kft Study ID: CFZ-17-30854-HU02 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-74	Adrian MIHALCEA	2017	Evaluate the efficacy of A-200-SL-OR3-CPd applied in maize to control Diabrotica virgifera. STAPHYT Study ID: CFZ-17-30854-RO03 GEP: Yes	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Unpublished		
KCP 6.2, 6.4-75	Sebastian Laug	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) Hetterich Fieldwork GbR Study ID: Ciech18-GE05 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-76	Robert Scheurich	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) Hetterich Fieldwork GbR Study ID: Ciech18-GE06 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-77	Anna Wandersee	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Pollen beetle (Meligethes aeneus), Rape stem weevil (Ceutorhynchus napi), Cabbage stem weevil (Ceutorhynchus pallidactylus) Hetterich Fieldwork GbR Study ID: Ciech18-GE08 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-78	Anna Wandersee	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Rape stem weevil and Cabbage stem weevil Hetterich Fieldwork GbR Study ID: Ciech18-GE14 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-79	Michal PLAWUSZEWSKI	2017	Determination of efficacy of A-200-SL-OR3-CPd used at the different rates against Ostrinia nubilialis. in maize. Eurofins Agroscience Services Sp. z o.o. Study ID: S17-03698-01 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-80	Jan Łyskawka	2017	Determination of efficacy of A-200-SL-OR3-CPd used at the different rates against Ostrinia nubilialis. in maize. Eurofins Agroscience Services Sp. z o.o.	N	CIECH Sarzyna S.A.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Study ID: S17-03698-02 GEP: Yes Unpublished		
KCP 6.2, 6.4-81	Lukasz CHERMULA	2017	Determination of efficacy of A-200-SL-OR3-CPd used at the different rates against Ostrinia nubilialis. in maize. Eurofins Agroscience Services Sp. z o.o. Study ID: S17-03698-03 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-82	Sam Martin	2019	Determination of Efficacy / Crop Safety of A-200SL-OR3-CPd against Pollen beetle (Brassicogethes aeneus) and secondary pests Rape stem weevil (Ceutorhynchus napi) and Cabbage stem weevil (Ceutorhynchus pallidactylus) in Oilseed rape OUTDOOR 2019 Eurofins Agroscience Services Study ID: S19-02310-01 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-83	Theodore Welby	2019	Determination of Efficacy / Crop Safety of A-200SL-OR3-CPd against Cabbage seed weevil (Ceutorhynchus obstric-tus) and Brassica pod midge (Dasineura brassicae) in Oilseed rape OUTDOOR 2019 Eurofins Agroscience Services Study ID: S19-02311-01 GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-84	Gábor Szilágyi	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in winter oil seed rape to control Cabbage seed weevil and Brassica pod midge. SynTech Research Hungary Kft. Study ID: SRHU18-085-428IE GEP: Yes Unpublished	N	CIECH Sarzyna S.A.
KCP 6.2, 6.4-85	Lajos Olasz	2018	Evaluate the efficacy of A-200-SL-OR3-CPd applied in maize to control Diabrotica virgifera. SynTech Research Hungary Kft. Study ID: SRHU18-090-428IE GEP: Yes Unpublished	N	CIECH Sarzyna S.A.